MINISTRY OF MUNICIPAL AFFAIRS

DEVELOPMENT COST CHARGE BEST PRACTICES GUIDE

REVISED OCTOBER 15, 2000

DOC
BC
G728
D:D484
2000
c.3

BRITISH COLUMBIA

Ministry of Municipal Affairs
Growth Strategies Office
Municipal Financial Services

www.marh.gov.bc.ca/GROWTH/

LEGISLATIVE LIBRARY OF BRITISH COLUMBIA
3 3298 00247 2992

101-00519

MINISTER'S MESSAGE

I take great pleasure in the publication of this updated *Development Cost Charge Best Practices Guide.*

The *DCC Best Practices Guide* was first published in July,1997. Local government officials and members of the development community have been generally very pleased with the guide. However, they did request that some further information be included, and there have been some legislative changes since 1997 which needed to be reflected in the guide. For example, the *Municipal Act* Reform process has led to a new title for the Act - the *Local Government Act*.

The objective of the Best Practices Guide remains to encourage local governments to standardize how they establish and administer DCC bylaws, while providing some flexibility in recognition of differing circumstances. Local governments which employ the best practices will likely find their DCC bylaws more readily approved by the ministry and accepted by the community.

The development community supports the establishment of DCCs becoming a more transparent local government process by use of the guide's best practices (with the information and calculations on which DCCs are based becoming accessible and understandable).

Development Cost Charges (DCCs) are one method to fund the infrastructure associated with growth. The encouraging response to *the DCC Best Practices Guide* since its publication in 1997 has prompted the preparation of a second companion guidebook, the *Development Finance Choices Guide* which is being published at the same time as this updated *DCC Best Practices Guide*. (The Choices Guide describes the tools available to B.C. local governments for financing growth-related infrastructure, outlines considerations in the choice of a particular tool and provides advice on the design and implementation of the various tools.)

Both guides are available on the Ministry of Municipal Affairs website at www.marh.gov.bc.ca/GROWTH/ (under Publications). Please do not hesitate to contact ministry staff directly with questions or comments.

I know you will find this updated publication a continuing valuable addition to your policy tool kit.

Cathy McGregor

Cathy McGregor
Minister of Municipal Affairs

October, 2000

LEGISLATIVE LIBRARY
VICTORIA, BC V8V 1X4

ACKNOWLEDGMENTS

1997 Contractor: Raymond Fung (City of North Vancouver)
Word Processing: Diana Branson and Janis Rowe, City of North Vancouver

Development Finance Review Committee (DFRC, 1997)
Saul Schubert, Chair
Murray Dinwoodie, Township of Langley
Maureen Enser, Urban Development Institute
Jim Godfrey, Resort Municipality of Whistler
Chris Hartman, Canadian Homebuilders Assoc.
Chuck Gale, City of Richmond
Robin Hicks, City of Coquitlam
David Linton, Urban Development Institute
Karen Monsarrat, BC Real Estate Association
Harriet Permut, Union of BC Municipalities
Keith Sashaw, Canadian Home Builders Assoc.
Bill Susak, Township of Langley
Al Tamblin, Ministry of Municipal Affairs
Elaine Taylor, Ministry of Municipal Affairs
Dale Wall, Ministry of Municipal Affairs
Igor Zahynacz, City of Port Coquitlam

Authors Panel
(some members of DFRC also served)
Paul Ham, City of Surrey
John Haythorne, Bull, Housser and Tupper
Jim Laughlin, City of North Vancouver

Editorial Panel
(some members of DFRC also served)
Neil Goldie, Ministry of Municipal Affairs
Cresswell Walker, City of Nanaimo

Year 2000 Update Subcommittee
Neil Goldie, Ministry of Municipal Affairs
Paul Ham, City of Surrey
Robin Hicks, City of Coquitlam
Paul Lee, City of Richmond
David Linton, Urban Development Institute
Michael Marson, Ministry of Municipal Affairs
Elaine Taylor, Ministry of Municipal Affairs

Publications Manager
Michael Marson, Ministry of Municipal Affairs

Canadian Cataloguing in Publication Data
Main entry under title:
Development cost charge best practices guide

ISBN 0-7726-4388-1

1. Impact fees - British Columbia. 2. Municipal services - British Columbia - Finance. 3. Local finance - British Columbia. 4. Real estate development – British Columbia - Costs. I. British Columbia. Growth Strategies Office.

HD9352.B7D48 2000 336.1'6 C00-960341-7

TABLE OF CONTENTS

INTRODUCTION 1

OBJECTIVES OF THIS GUIDE 1
MINISTRY SUPPORT 1
BACKGROUND 1
GUIDING PRINCIPLES 2
  INTEGRATION 2
  BENEFITER PAYS 2
  FAIRNESS AND EQUITY 2
  ACCOUNTABILITY 2
  CERTAINTY 2
  CONSULTATIVE INPUT 2
  DEFINITION OF LOCAL GOVERNMENT 2
OVERVIEW OF CONTENTS 3
DEVELOPMENT OF THE GUIDE 3
AMENDMENT OF THE BPG 3
DISCLAIMER 4

PART 1: GUIDEBOOK
CHAPTER 1

OVERVIEW OF DCCS 7

GENERAL DEFINITION 7
HISTORY OF DCCS IN B.C. 7
LEGISLATIVE AND REGULATORY BACKGROUND 8
LOCAL GOVERNMENT RESPONSIBILITIES 8
EXEMPTIONS FROM DCCS 8
RELATIONSHIP TO OTHER MUNICIPAL DOCUMENTS 9
BYLAW APPROVAL PROCESS 9

CHAPTER 2

BYLAW DEVELOPMENT 13

PUBLIC PARTICIPATION 13
EXTENT OF APPLICATION 16
  A MUNICIPAL-WIDE CHARGE 16
  AN AREA-SPECIFIC CHARGE 16
  CRITERIA FOR DECISION-MAKING 16
  OPTIONS FOR ROAD DCCS 17
    MUNICIPAL-WIDE ROAD DCCS 17
    AREA-SPECIFIC ROAD DCCS 17
  OPTIONS FOR STORM DRAINAGE DCCS 17
    AREA-SPECIFIC STORM DRAINAGE DCCS 17
    MUNICIPAL-WIDE STORM DRAINAGE DCCS 17
    RATIONALE FOR RECOMMENDED BEST PRACTICE 18
  OPTIONS FOR SANITARY DCCS 18
    AREA-SPECIFIC SANITARY DCCS 18
    MUNICIPAL-WIDE SANITARY DCCS 18
    RATIONALE FOR RECOMMENDED BEST PRACTICE 18
  OPTIONS FOR WATER DCCS 18
    AREA-SPECIFIC WATER DCCS 18

    - Municipal-wide Water DCCs 18
  - Options for Parkland DCCs 19
    - Recommended Best Practice 19
- Program Time Frame 19
  - A Build Out Program 19
  - A Revolving Program 19
  - Criteria for Decision-making 19
- Categories of Land Use to be Charged 20
  - Types of Land Use 20
  - Level of Category Breakdown 21
    - Residential Land Use Categories 21
    - Non-residential Land Use Categories 23
    - Recommended Best Practice 23
- Appropriate Units for Charges 23
  - Units for Residential Land Uses 23
    - Development Unit Option 23
    - Floorspace Option 23
  - Units for Non-residential Land Uses 24
  - Other Options 24
  - Criteria for Decision-making 24
    - Recommended Best Practice 25
- Project Eligibility 25
  - Road Projects 26
  - Storm Drainage Projects 26
  - Sanitary Projects 27
  - Water Projects 27
  - Parkland Acquisition and Improvement Projects 27
- Recoverable DCC Costs 28
- Municipal Assist Factor 29
  - Criteria for Decision-making 30
- Social Housing Provisions 30

CHAPTER 3
BYLAW ADMINISTRATION 31

- Collection of Charges 31
  - Collection at Subdivision Approval 31
  - Collection at Building Permit Issuance 32
- Monitoring and Accounting 32
- Grace Periods and Instream Applications 33
  - Grace Periods 33
  - Subdivision Applications 33
  - Building Permit Applications 34
- Credits and Rebates 34
  - DCC Credits 35
  - DCC Rebates 35
- Process for Bylaw Amendment 35
  - Minor DCC Amendment 35
  - Major DCC Amendment 36

PART 2: TECHNICAL MANUAL

CHAPTER 4
ESTIMATING NEW DEVELOPMENT 39

- Prerequisite Policy Decisions 39
- Sources of Background Information 39

New Development Projections 39
  Projected Residential Development 39
    Modified Population Growth Method 40
    Development Potential Method 43
Projected Commercial and Industrial Development 44
  Population Growth method 44
  Development Potential Method 45
Projected Institutional Development 46

Chapter 5

Compiling a DCC Program 47

Prerequisite Policy Decisions 47
Source of Background Information 47
Estimation of Capital Costs 47
Presentation of a DCC Program 48

Chapter 6

Determining the Net DCC Recoverable Amount 51

Deducting Grants and Other Funding Sources 51
Allocation Benefit 51
  Roads 52
  Storm Drainage, Sanitary, and Water 52
  Suggestions for Apportionment 52
Applying the Municipal Assist Factor 54
Calculating the Net Recoverable Cost of the DCC Program 54
Deducting Existing DCC Reserves 54
Calculating the Net Recoverable Amount 54

Chapter 7

Calculating DCCs 57

Approaches to DCC Calculation Methodology 57
Road DCCs 57
Storm Drainage DCCs 58
Sanitary DCCs 60
Water DCCs 63
Parkland DCCs 63

Chapter 8

Bylaw Presentation 67

Legislative Basis 67
DCC Bylaw 67
Supporting Documentation 67

Index 69

Appendix A: Ministry Submission Checklist 73
Appendix B: *Local Government Act* Excerpts 85
Appendix C: Development Cost Charges (Instalments) Regulation 93
Appendix D: Parkland circular 97

INTRODUCTION

Development Cost Charges (DCCs) are monies that are collected from land developers by a municipality, to offset some of the infrastructure expenditures incurred, to service the needs of new development. Imposed by bylaw pursuant to the *Local Government Act*, the charges are intended to facilitate development by providing a method to finance capital projects related to roads, drainage, sewers, watermains and parks.

As many cities and towns in B.C. currently face significant development pressures, expansion of existing or installation of new infrastructure systems is required, to support new development and its demand on utilities and services. However, the costs associated with these infrastructure requirements create significant public sector burdens. Governments at all levels also face significant constraints in the use of general purpose taxation and have placed increasing emphasis on the "user (or benefiter) pay" principle. In response to these pressures, DCCs have been utilized by local governments as a cost recovery mechanism for apportioning infrastructure project costs amongst developers of land.

DCCs allow monies to be pooled from many developers so that funds can be raised to construct the necessary services in an equitable manner; as such, DCCs facilitate development. Simply, the municipality can be considered to be the co-ordinator of the capital program and administrator of the funds collected.

Objectives of this Guide

Many local governments have adopted DCC bylaws. However, each jurisdiction has developed its own understanding of, and approach to, establishment of such a bylaw. As the provisions outlined in the *Local Government Act* are somewhat general, the different interpretations between local governments have led to some degree of uncertainty and inconsistency, especially in the areas of cost charge calculation and bylaw administration. The objective of the Best Practices Guide (BPG) is to encourage local government to standardize the general practices for the formulation and administration of DCC bylaws, while recognizing that some flexibility is necessary to accommodate a municipality's specific circumstances.

Ministry Support

DCC bylaws must be approved by the Ministry of Municipal Affairs (MMA). The Ministry has indicated that local governments following the BPG in preparing a bylaw and the DCC calculations will obtain an expedited approval from the Ministry. To assist Ministry staff in the review of the proposed DCC Bylaw, Appendix A contains a Ministry Submission Summary Checklist. A copy of this checklist should be completed by local government and attached to the bylaw approval package being sent to the Inspector of Municipalities.

Background

In 1995, the Ministry of Municipal Affairs embarked on a comprehensive review of the systems used in B.C. for financing the public costs of urban development. The Development Finance Review Committee (DFRC) was formed in December of that year to examine a variety of issues, primarily related to the DCC mechanism. The DFRC comprises the following principal stakeholders:

- Ministry of Municipal Affairs;
- Urban Development Institute (UDI);
- Canadian Home Builders' Association of B.C.(CHBA-BC);
- B.C. Real Estate Association (BCREA);
- Planning Institute of B.C. (PIBC); and,
- Union of B.C. Municipalities (UBCM).

One of the proposals that came out of the DFRC was the development of this DCC Best Practices Guide which was initially published in July 1997.

The guide has been very well received since its initial publication and it was decided in the fall of 1999 to update the document and incorporate feedback received from stakeholders. Changes in the legislative framework that have occurred since 1997 would also be addressed.

As a result of stakeholder feedback, additional details on the following topics have been included in this revised version of the guide:

- information on parkland improvements;
- municipal liaison committees;
- social housing exemptions or reductions in DCCs;
- density gradient calculations;
- habitable floor space;
- floor space options and lot size;
- holding costs; and,
- inflation adjustments.

It should also be noted that the *Local Government Statutes Amendment Act*, (Bill 14) was given Royal Assent on June 12, 2000 and thereby changes the name of the *Municipal Act* to the *Local Government Act*. Regional Districts are also subsumed by the term "local government".

Guiding Principles

Six significant principles, which should be followed in the development of a DCC bylaw, have been identified by the stakeholders. These principles act as the common threads that underlie the BPG and are documented as follows.

Integration
A DCC program is subordinate to broader goals of the public and therefore, should reflect other initiatives, such as the growth strategy goals set out in the *Local Government Act*, regional growth strategies, and municipal Official Community Plans. The charges are only one element of a municipality's approach in dealing with issues of land efficiency, housing affordability, and community sustainability. Thus development of DCCs must be consistent with community plans, land use plans, and corporate financial and capital infrastructure strategies.

Benefiter Pays
Infrastructure costs should be paid by those who will use and benefit from the installation of such systems.

Fairness and Equity
Recognizing that costs should be shared in some way amongst benefiting parties, DCCs should employ mechanisms that distribute these costs between existing users and new development in a fair manner. Further, within the portion attributable to new development, DCCs should also equitably distribute costs between the various land uses and different development projects.

Accountability
Establishment of DCCs should be a transparent, local government process, and all information on which DCCs are based should be accessible and understandable by stakeholders.

Certainty
DCCs are a co-ordinated effort, where the local government's role is to facilitate the level of development foreseen by regional and community planning; the local government simply acts as the administrator of the DCC program. Therefore, certainty should be built into the DCC process, both in terms of stable charges and orderly construction of infrastructure. Stability of DCC rates will assist the development industry in the planning of their projects. At the same time, sufficient DCC funds must be collected to ensure construction of infrastructure in a timely manner. Inadequate planning may result in developments being deferred or even cancelled.

Consultative Input
The development of DCCs must provide adequate opportunities for meaningful and informed input from all stakeholders.

Definition of Local Government

Both municipalities and regional districts are encompassed by the term "local government". As already noted, the name of the *Municipal Act* was changed to the *Local Government Act* in June, 2000. There may be times where the reader must make the logical extension required to have the wording of the guide also apply to regional districts. For example, insert "regional district board member" where the guide says "municipal councillor."

Overview of Contents

The purpose of this Best Practices Guide (BPG) is to provide local governments with a document which outlines various, broadly accepted, practices for the formulation and application of DCC bylaws. The BPG consists of two components:

Part I - Guidebook; and,
Part II - Technical Manual.

Part I is a guidebook that generally describes the concept of development cost charges and the broad policy issues which should be considered before the establishment of a DCC bylaw. The intended audience for this portion of the BPG includes municipal councillors, regional district board members and senior staff who have the responsibility of developing policy and establishing a local government's approach to DCCs.

Part II is a technical manual detailing the procedures and calculations associated with developing a DCC bylaw. The range of practices related to each specific technical aspect is presented, along with a description of the rationale which lead to the use of a particular alternative. Where possible, a "recommended best practice" has been identified. This part of the BPG is intended for technical personnel who will be responsible for the development of the actual bylaw and the calculation of DCC rates.

Development of the Guide

The original DCC Best Practices Guide was produced with the co-operation of many people. The original draft was written primarily by Raymond Fung (City of North Vancouver) and supported by an Authors Panel consisting of Murray Dinwoodie (Township of Langley), Chuck Gale (City of North Vancouver), Paul Ham (City of Surrey), John Haythorne (Bull, Housser & Tupper), and Jim Laughlin (City of North Vancouver). Diana Branson and Janis Rowe (City of North Vancouver) provided the word processing.

In addition, an Editorial Panel was formed to review the draft. The Editorial Panel members consisted of Dale Wall and Neil Goldie representing MMA, Jim Godfrey (Resort Municipality of Whistler) and Robin Hicks (City of Coquitlam) representing the Union of BC Municipalities (UBCM) Cresswell Walker (City of Nanaimo) acted as an alternate, and David Linton of the Urban Development Institute (UDI), Chris Hartman of Parklane Construction, and Keith Sashaw of the Canadian Home Builders Association (CHBA) represented the development industry.

A draft guide was presented to the Development Finance Review Committee and authorized for distribution to stakeholders for comment. After soliciting input from all stakeholders the Best Practices Guide was published in mid-1997.

Two years after initial publication, a DFRC sub-committee was formed to review and update the Best Practices Guide. This committee was comprised of Elaine Taylor, Neil Goldie, and Michael Marson representing the Ministry of Municipal Affairs; David Linton of UDI, Paul Lee (City of Richmond), Paul Ham (City of Surrey), and Robin Hicks (City of Coquitlam).
The updates to the guide were presented for DFRC consideration in June 2000 and subsequently published. The new layout was developed and implemented by Michael Marson.

Amendment of the BPG

Publishing and distribution of the DCC Best Practices Guide are the responsibility of the Ministry of Municipal Affairs. As this guide is intended to be a "living document," the Ministry is the lead agency responsible for future maintenance of this guide and updating it, as required. Even as this updated version of the guide is complete, there is the recognition that issues may arise in the future and amendments may also be necessary to reflect legislative changes. The Development Finance Review Committee will continue to monitor the landscape and commission updates to the guide when appropriate.

Since publishing the original Best Practices Guide, the Ministry continues to research DCC issues as raised and has provided access to the guide via the Internet.

Enquiries regarding this document should be made to:

Growth Strategies Office
Ministry of Municipal Affairs
P.O. Box 9490 Stn Prov Govt
Victoria, B.C. V8W 9N7
Tel.: (250) 387-3394
Fax: (250) 356-9019
E-mail: gsainfo@hq.marh.gov.bc.ca

Copies of the guide may be downloaded from the publications page on the Growth Strategies Office website
www.marh.gov.bc.ca/GROWTH/

Disclaimer

This document contains recommendations for a consistent approach to the preparation and use of DCC bylaws by local government in B.C. It is not intended to contain legal advice. While every care has been taken in the preparation of this document, none of the numerous contributors, nor the Ministry of Municipal Affairs, can accept any liability for any loss or damage which may be suffered by any person or organization as a result of its use.

Users are encouraged to seek legal advice regarding the drafting and practical application of DCC Bylaws.

Part 1:

Guidebook

1. OVERVIEW OF DCCS

This chapter presents an overview of DCCs including a general definition, the legislative and regulatory background for the charges, the responsibilities of local government, specific exemptions from DCCs, the relationship between the DCC bylaw and other local government documents, and the bylaw approval process.

General Definition

A development cost charge is a means provided by sections 932 through 937 of the *Local Government Act* to assist local governments in paying the capital costs of installing certain municipal services, the installation of which is directly or indirectly affected by the development of lands and/or the alteration/extension of buildings (section 933 (1) and (2)). DCCs can be specified according to different zones or specified areas as they relate to different classes and amount of development, but charges should be similar for all developments that impose similar capital cost burdens on a local government (section 934 (2) and (3)). At present, the *Local Government Act* permits DCCs to be established for providing, constructing, altering, or expanding facilities related only to the following local government services:

- highways, other than off-street parking;
- sewage;
- water;
- drainage; and,
- parkland acquisition and improvement (section 933 (2)).

DCCs are payable by parties obtaining an approval of subdivision or a building permit, as the case may be (section 933 (1) and (5)).

Inclusion of soft services such as childcare, employee housing, fire protection, police, etc. as a part of DCCs is not permissible under the *Local Government Act*. However, it is noted that the *Vancouver Charter* and the *Resort Municipality of Whistler Act* has enabled these two municipalities to establish similar charges for certain soft services.

At the risk of oversimplifying a complex issue, DCCs are generally determined by dividing the net capital infrastructure costs attributable to new development over a certain time period, by the corresponding number of projected development units (or area) that will be developed in that same time period. An example of the time span for DCC calculations is a five or ten year period. This coincides with the financial plans and capital expenditure programs which are produced by many local governments for planning purposes. Charges are commonly imposed on a range of land uses, including both residential and non-residential. The remainder of this document seeks to provide further explanation of the legislation and possible applications of the *Local Government Act* sections in a DCC bylaw.

History of DCCs in B.C.

The evolution of DCCs in B.C. can be traced to the 1958 amendments to the *Municipal Act*. These changes allowed an Approving Officer to refuse approval of a subdivision plan, when the Officer was of the opinion that the cost to the municipality of providing public utilities or other municipal works and services would be excessive. Formerly, a local government faced with an application that required off-site municipal infrastructure would have used local government revenues to construct the required services. With the amendments, if a municipality declined to do so, the Approving Officer would refuse subdivision approval.

To avoid the latter situation, municipalities began to enact what came to be called Excessive Subdivision Cost Bylaws or Impost Fees. However, the courts ruled against the validity of such bylaws and indicated that while municipalities had the power to refuse subdivision approval, they had no power to charge for any resulting infrastructure costs.

A series of *Municipal Act* amendments attempted to address the court ruling. In 1968, development permit powers were enacted which allowed municipalities to designate development areas and control the development of land in those areas. In 1971, this legislation was replaced with land use contract powers. Impost fees levied under a land use contract were found by the courts to be valid. In 1977, land use contract powers were eliminated, and the current authority to impose development cost charges was introduced.

Legislative and Regulatory Background

DCCs are established within a governance structure which includes three layers of hierarchy. At the most direct level, DCCs are subject to the policy and technical bulletins issued by the Ministry whose responsibility it is to review the bylaws submitted by local government for approval. This level lies under the legislative framework described by the sections of the *Local Government Act* related to DCCs (Appendix B). The provincial legislation is enacted under the authority of the provincial government as set out in the Canadian Constitution.

The purpose of the Best Practices Guide is to fill a void between the broad legislative framework and specific local government practice. The intent of the guide is to operate within the existing legislative framework, to clarify Ministry policies and practices, and to identify where possible, the best practices for establishing DCC programs and related bylaws.

Local Government Responsibilities

In the process of developing DCC bylaws, local governments must consider the responsibilities outlined in the Act. Local governments have to take into account whether the proposed DCCs will:

- be excessive in relation to the capital cost of prevailing standards of service;
- deter development; or,
- discourage the development of reasonably priced housing or reasonably priced serviced land (section 934 (4) (d)).

Another stipulation is that DCCs must be used to acquire or construct the works for which they were collected and cannot be used for any other purpose (section 935). Therefore, both broad matters of policy as well as technical issues should be carefully considered by the local government prior to establishing DCCs.

These include:

- level of service;
- housing affordability;
- equity between existing taxpayers and developers or newcomers attracted by development;
- the municipal assist factor (a concept more fully discussed in Chapter 2);
- the projected amount of new development; and,
- the utility services required to support that projected development.

Exemptions from DCCs

Although the *Local Government Act* allows local governments to generally impose DCCs with considerable flexibility, section 933 (4) describes circumstances when development is exempt from paying these charges. Three specific cases are:

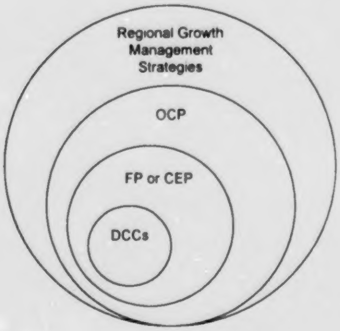
- where a building permit authorizes the construction, alteration, or extension of a building, or part of a building which is solely used for public worship such as a church;
- where a building permit is issued for the construction, alteration, or extension of a building that contains less than four dwelling units, and the building is exclusively for residential use; and,
- where the value of the work covered by the building permit does not exceed $50,000.

In addition, section 933 (3) states that DCCs are not payable if it can be proven that the development does not impose a new capital cost burden on the municipality, or if a DCC was previously paid for the same development. For example, depending on the structure of a Land Use Contract, impost fees for services may exempt certain DCCs from having to be paid. Other provisions in the *Local Government Act*, such as Latecomer Agreements (section 939) might also exempt certain capital costs from being recovered through DCCs.

The point of section 933 (3) is to prohibit developments from being charged twice. However, if new capital cost burdens will be placed on the local government as a result of further development, then DCCs can be collected on the additional increment of development.

Relationship to Other Local Government Documents

As previously mentioned, one of the guiding principles on which DCCs should be established is the principle of integration with other local government documents. In fact, the *Local Government Act* stipulates that local governments shall take into consideration future land use patterns and development, the phasing of works and services, and the provision of parkland described in an Official Community Plan (section 934 (4)). Further, if the Inspector of Municipalities determines that a DCC bylaw is not related to capital costs attributable to projects included in a Capital Expenditure Bylaw under sections 329 and 834 (2), approval of the DCC bylaw may be refused (section 937 (2)).



A DCC bylaw is just one of the means available to a municipality to deal with land use issues, and in effect, the formulation of charges is a product of the interaction between the Official Community Plan (OCP) and the financial plan or Capital Expenditure Program (CEP) as appropriate. This is explained as follows.

The OCP is a general statement of the broad development objectives and policies of the local government. This plan is to be developed within the larger context of regional growth management strategies. The OCP is used as a basis to develop master servicing plans, in accordance with current design criteria and standards. Proposed projects arising out of the servicing plans are compiled in a financial plan or CEP as applicable.

The financial plan or CEP establishes the capital projects required by a municipality (such as roads, drainage, sanitary sewer, water, and parks) over a certain time period, including projects needed to accommodate new development. The projects for which DCCs are established form a subset of the financial plan or CEP.

The OCP and financial plan are interrelated, and each plan may require adjustment through separate processes in response to the goals, constraints, and achievements of the other. The nature of the interaction between these local government documents can be characterized as a complicated iterative process involving numerous assumptions and uncertainties. While the OCP outlines the long term land use pattern to provide a framework for making development decisions, development concepts and servicing plans are always evolving. Therefore, the vision for the community's growth is representative for only a brief period of time, thus requiring the OCP to be regularly modified. Changes made to this plan or possibly more detailed, neighbourhood plans greatly affect development densities which have a direct bearing on corresponding infrastructure requirements (not to mention, other planning documents such as the Zoning Bylaw) and affect the financial plan.

It is out of this interaction that DCCs are formulated. The intent of the charges is to appropriately determine the share of those capital projects needed to accommodate new development which must be paid, based on the impact on the total servicing costs.

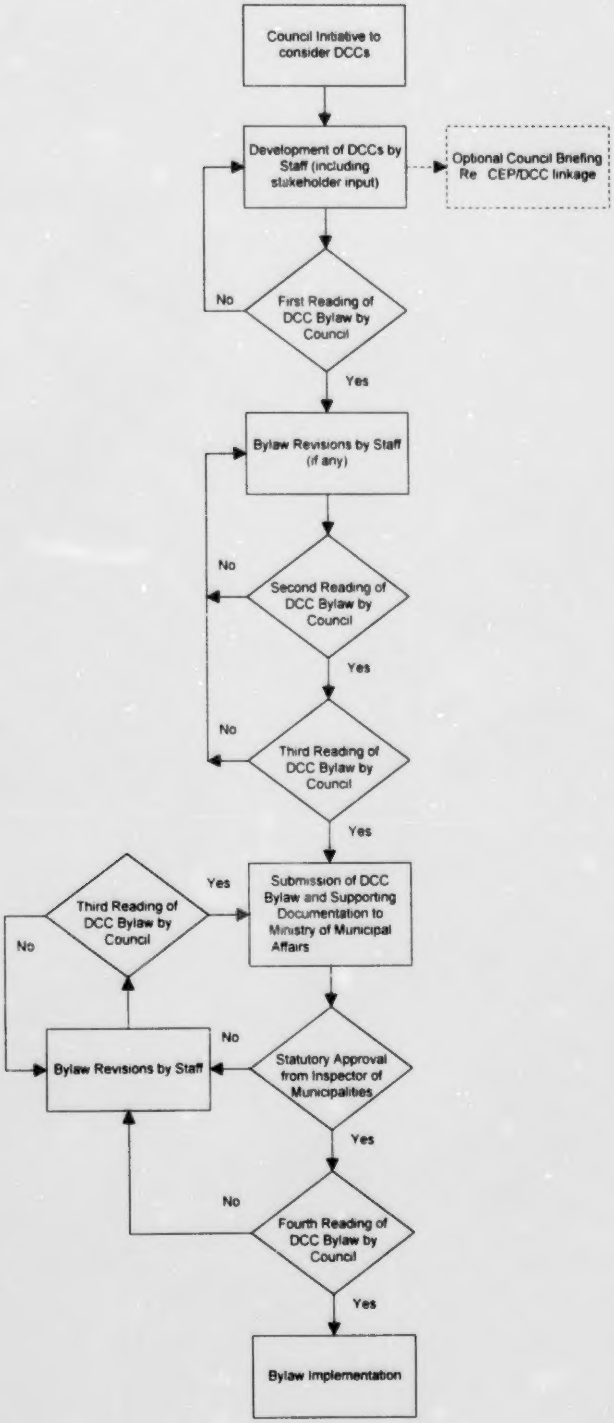
Bylaw Approval Process

The *Local Government Act* does not lay out an "official" approval process specific to DCCs, with the exception of one requirement: a local government cannot adopt a DCC bylaw without first obtaining approval from the Inspector of Municipalities (section 937 (1)).

Typically, the process originates with a council or regional district board initiative for the consideration of DCCs, perhaps to include a resolution to adopt the Best Practices Guide as the basis for bylaw development. Local

Government staff (or an outside consultant) will then proceed to develop a bylaw and calculate the DCC rates. During this time, some sort of public process can be accommodated (see Chapter 2 for a fuller discussion on public involvement). The proposed bylaw then goes to the council or regional district board for first reading, after which it is commonly revised before being given second and third reading. The council or regional district board might request additional public consultation or adjustment of parameters such as the municipal assist factor. After appropriate revisions are made the bylaw will receive third reading. At this point, the DCC bylaw and supporting documentation are forwarded to the Ministry of Municipal Affairs.

The Ministry will review the bylaw and may ask for revisions to be made. When the DCC bylaw is to their satisfaction, statutory approval will be granted by the Inspector of Municipalities. Once Ministry approval is received, the council or regional district board will read the bylaw a fourth time (considered adoption), at which point the DCC Bylaw takes effect. This process is shown schematically in the following diagram.



Council Initiative to consider DCCs
Development of DCCs by Staff (including stakeholder input)
Optional Council Briefing Re CEP/DCC linkage
No
First Reading of DCC Bylaw by Council
Yes
Bylaw Revisions by Staff (if any)
No
Second Reading of DCC Bylaw by Council
Yes
No
Third Reading of DCC Bylaw by Council
Yes
Yes
Third Reading of DCC Bylaw by Council
No
Submission of DCC Bylaw and Supporting Documentation to Ministry of Municipal Affairs
No
Bylaw Revisions by Staff
Statutory Approval from Inspector of Municipalities
Yes
No
Fourth Reading of DCC Bylaw by Council
Yes
Bylaw Implementation

2. BYLAW DEVELOPMENT

This part of the Best Practices Guide details the major policy considerations associated with development of a DCC bylaw. These considerations centre around issues of an appropriate public process, the extent of application of the charges (municipal-wide or area-specific), the time frame for the DCC program (build out or revolving), the categories of development to be charged (the types of land use and the level of category breakdown), the appropriate units for the charges (a unit or area basis), the eligibility of projects, the recoverable DCC costs, and setting the municipal assist factor.

Public Participation

In the most fundamental sense, representative democracies recognize the general right of citizens to participate meaningfully in government decisions that affect them. In other words, public participation in decision making is both fair and essential. It has been the experience of many governments that decisions which fail to balance public interests inevitably lead to negative consequences. Either from a lack of reliable information or insufficient attention, the failure to balance public interests can result in continuing conflict, instability, inefficient use of government resources, and regression from sustainable actions. Many people experienced in the public sector believe that complex decisions are better, fairer, and more stable, when a thorough understanding of the range of needs in the community is taken into account. This involvement reflects the following trends:

- the public seeking a greater say in government decisions; and,
- the public demanding participation in decision-making.

> ***Recommended Best Practice***
>
> ***The development of a DCC bylaw should include a meaningful public process to obtain input from stakeholders prior to first and third readings.***

Therefore, public participation is a means by which the public is not only heard before a decision by a governing body, but has an opportunity to influence the whole decision-making process. The relevant public to a given decision is all persons, groups, or organizations that have a perceived, actual, or potential stake or interest in the results of the process, also known as "stakeholders".

As it pertains to DCCs, public participation or consultative input is one of the guiding principles on which DCCs should be established. However, as DCCs are informed by broader local government documents including the OCP, public participation should be constrained to issues associated with DCCs. Public input should not be related to issues surrounding the OCP or the regional growth strategy, as broad public consultations were undertaken during those processes. The level of input should be limited to DCC considerations, such as the use of municipal-wide or area-specific DCCs, benefit allocation, a suitable grace period, etc.

In the province of B.C., there are no mandatory activities in the DCC legislation similar to the public hearing requirements for a rezoning application. In comparison, Ontario's *Development Charges Act* (1990) requires at least one public meeting to be held before a development charge bylaw is passed. While B.C. may not have legislated public meetings, the Ministry of Municipal Affairs does consider public participation to be important. Evidence of a good public process is an issue that is reviewed by the Ministry when considering bylaw approval.

Before the public participation strategy is developed, stakeholders should be identified. The list includes (but is not limited to):

- local government staff (planners, engineers, and finance personnel);
- local chapter of Urban Development Institute;
- local chapter of Canadian Home Builders Association;
- representative(s) from the Real Estate Association;

2. BYLAW DEVELOPMENT

This part of the Best Practices Guide details the major policy considerations associated with development of a DCC bylaw. These considerations centre around issues of an appropriate public process, the extent of application of the charges (municipal-wide or area-specific), the time frame for the DCC program (build out or revolving), the categories of development to be charged (the types of land use and the level of category breakdown), the appropriate units for the charges (a unit or area basis), the eligibility of projects, the recoverable DCC costs, and setting the municipal assist factor.

Public Participation

In the most fundamental sense, representative democracies recognize the general right of citizens to participate meaningfully in government decisions that affect them. In other words, public participation in decision making is both fair and essential. It has been the experience of many governments that decisions which fail to balance public interests inevitably lead to negative consequences. Either from a lack of reliable information or insufficient attention, the failure to balance public interests can result in continuing conflict, instability, inefficient use of government resources, and regression from sustainable actions. Many people experienced in the public sector believe that complex decisions are better, fairer, and more stable, when a thorough understanding of the range of needs in the community is taken into account. This involvement reflects the following trends:

- the public seeking a greater say in government decisions; and,
- the public demanding participation in decision-making.

> ***Recommended Best Practice***
>
> ***The development of a DCC bylaw should include a meaningful public process to obtain input from stakeholders prior to first and third readings.***

Therefore, public participation is a means by which the public is not only heard before a decision by a governing body, but has an opportunity to influence the whole decision-making process. The relevant public to a given decision is all persons, groups, or organizations that have a perceived, actual, or potential stake or interest in the results of the process, also known as "stakeholders".

As it pertains to DCCs, public participation or consultative input is one of the guiding principles on which DCCs should be established. However, as DCCs are informed by broader local government documents including the OCP, public participation should be constrained to issues associated with DCCs. Public input should not be related to issues surrounding the OCP or the regional growth strategy, as broad public consultations were undertaken during those processes. The level of input should be limited to DCC considerations, such as the use of municipal-wide or area-specific DCCs, benefit allocation, a suitable grace period, etc.

In the province of B.C., there are no mandatory activities in the DCC legislation similar to the public hearing requirements for a rezoning application. In comparison, Ontario's *Development Charges Act* (1990) requires at least one public meeting to be held before a development charge bylaw is passed. While B.C. may not have legislated public meetings, the Ministry of Municipal Affairs does consider public participation to be important. Evidence of a good public process is an issue that is reviewed by the Ministry when considering bylaw approval.

Before the public participation strategy is developed, stakeholders should be identified. The list includes (but is not limited to):

- local government staff (planners, engineers, and finance personnel);
- local chapter of Urban Development Institute;
- local chapter of Canadian Home Builders Association;
- representative(s) from the Real Estate Association;

- local private sector developers;
- public sector developers such as the School District or Health Board;
- Chamber of Commerce;
- Ratepayers Associations; and,
- the general public.

It is noted that not all of these groups exist in every municipality, however representation from both residential and non-residential developers as well as the three municipal departments should be sought.

Depending on the composition of stakeholders, a range of public participation activities exist to obtain input on the issue of DCCs. For example, at the most limited level, comments on the DCC bylaw could be solicited from selected stakeholders. Or public meetings could be held either with council present as a committee of the whole or as a policy committee, or without council, such as a public information meeting. The latter is not as effective, as public information meetings tend to be forums for presenting information as opposed to opportunities for obtaining input.

Another method for increased participation around DCCs is the use of a "municipal liaison committee". Municipal liaison committees have proven useful in facilitating communication between the local government and the development industry regarding proposed bylaws or policies and development approval processes. These committees are formed between a local government and developers and are typically comprised of representative officials from the local government, and development companies who are active in the local market, including commercial and residential developers.

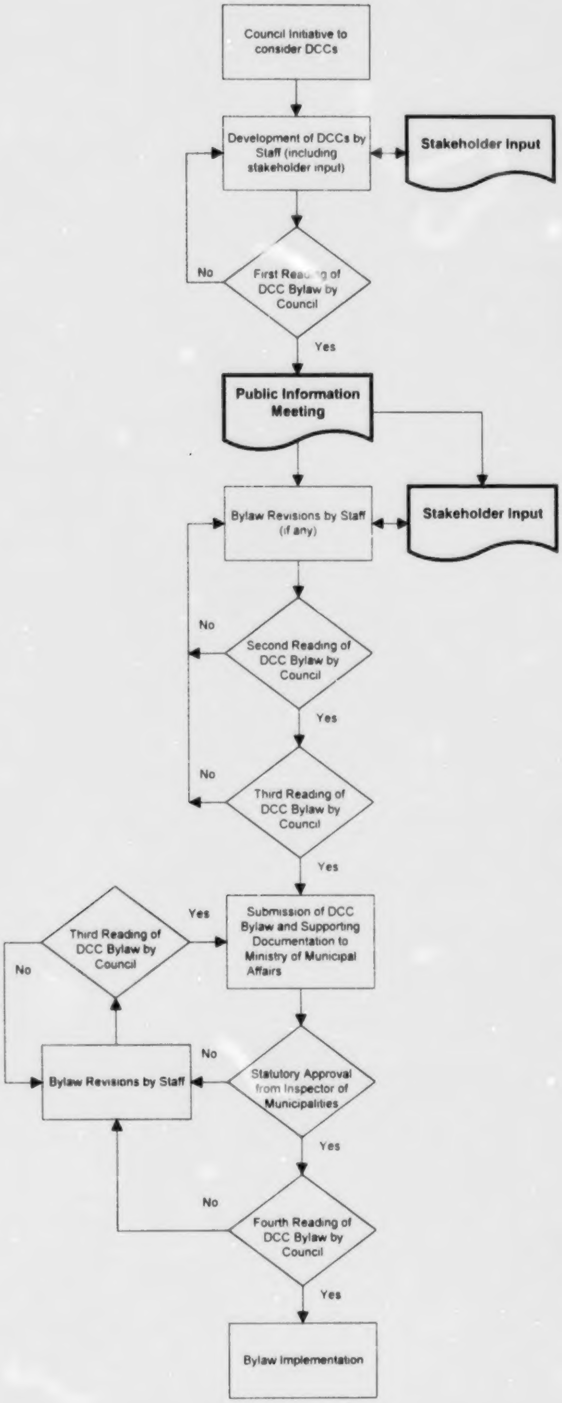
The Urban Development Institute (UDI) has a history of co-ordinating the participation of its members on municipal liaison committees. The contact at UDI is the Executive Director who can be reached at (604) 669-9585.

Dialogue with stakeholders could be facilitated either on an ad hoc or an ongoing basis. An example of the former could be a task force specifically struck to provide input on the issue of DCCs. To provide for ongoing public input into their DCC bylaw and future revisions, one Lower Mainland municipality has proposed the concept of a DCC Advisory Forum. The forum will consist of significant stakeholders, and if deemed appropriate, general public input will be solicited as well. Comments and advice from the DCC Advisory Forum would be made available to council, or their policy committee in association with any suggested future changes to the City's DCC bylaw. The Advisory Forum will be chaired by the person with the responsibility for bylaw development.

A public participation strategy related to DCCs could involve one or more of the above activities. The actual strategy might depend on a municipality's specific circumstances including the level of complexity involved with a particular set of charges and the level of participation desired by stakeholders.

Some have pointed out that the authority to adopt the DCC bylaw rests with council, regardless of stakeholder interests. Further, the time and financial resources associated with public processes can be substantial. Despite the opposing view, it is believed that a DCC bylaw resulting from a consensus-based process will allow council to make wiser decisions. However, the process must be clearly defined, timely, effective, uncomplicated, and focussed on building consensus. The recommended best practice regarding a public participation strategy associated with DCCs involves the following minimum activities.

It is recommended that opportunities for stakeholder input be provided at two points during the development of the DCC bylaw: before first reading by council and before third reading by council. In addition, it is recommended that a public information meeting be held after first reading of the bylaw by council. In this way, stakeholders can be involved in any revisions of the bylaw, taking into consideration comments from council as well as concerns arising from the public meeting. This recommended strategy is illustrated in the following schematic.


Council Initiative to consider DCCs
Development of DCCs by Staff (including stakeholder input)
Stakeholder Input
No
First Reading of DCC Bylaw by Council
Yes
Public Information Meeting
Bylaw Revisions by Staff (if any)
Stakeholder Input
No
Second Reading of DCC Bylaw by Council
Yes
No
Third Reading of DCC Bylaw by Council
Yes
Yes
Third Reading of DCC Bylaw by Council
No
Submission of DCC Bylaw and Supporting Documentation to Ministry of Municipal Affairs
No
Bylaw Revisions by Staff
Statutory Approval from Inspector of Municipalities
Yes
No
Fourth Reading of DCC Bylaw by Council
Yes
Bylaw Implementation

Extent of Application

The extent to which DCCs will be applied in a municipality or a regional district is an issue which should be considered when developing a DCC bylaw. Deciding whether the proposed DCC will be a "**municipal-wide**" or "**area-specific**" charge will influence the composition of the specific DCC program and indeed, the actual calculation of charges.

A Municipal-wide Charge

A municipal-wide DCC means that the same DCC rate is applied for a particular type of land use deemed to generate a similar or same capital cost burden, throughout the municipality regardless of the location of any specific development.

An Area-specific Charge

An area-specific DCC divides the municipality into areas according to geography or any other distinctive quality (e.g., a vacuum sewer system) for the purpose of determining the DCC. As each area has its own set of DCC projects, this results in a distinct charge for a particular type of land use within the defined area, and charges may differ substantially between areas depending on respective servicing requirements and projected development.

Criteria for Decision-making

Some general considerations affecting the choice of a municipal-wide or area-specific program include:

- the relationship between those who pay the DCC and benefiting users;
- the complexity and costs of administration associated with numerous charges;
- "Keeping It Short and Simple" to avoid confusion;
- equitable and fair distribution of costs in relation to developing land in different areas of a municipality;
- cash flow considerations;
- funding flexibility associated with fewer but larger accounts; and,
- the desire to support growth in cost effective areas, assuming that the OCP identifies several neighbourhoods having equal development potential without giving any priority.

Given all of these considerations, a municipality may choose to prioritize or weight the criteria in order to arrive at a decision. Despite all efforts to be as accurate and detailed as possible in the DCC calculation methodology, a certain amount of "averaging" takes place when deriving the charges.

When the circumstances within a certain area (such as projected new development units or the capital cost requirements) deviate significantly from the average condition, consideration should be given to an area-specific charge. In other words, the approach should strive to support the principle of fairness and equity. However, if new development is projected to occur fairly evenly throughout the municipality, and the capital cost burdens between neighbourhoods are similar, then consideration should be given to a municipal-wide charge. In this case, some fairness and equity is perceived to be "traded off" for simplicity and reduced administrative effort.

In addition, identification of specific projects which are needed to accommodate new development can be a difficult task, when the projected development could take place in a variety of areas. The advantage of a municipal-wide DCC is the flexibility it offers to accommodate changes, when the pattern of development turns out to be significantly different than was projected at the time of establishing the DCC bylaw. A drawback to an area-specific approach is the inability to transfer funds between accounts in response to unanticipated servicing needs. It has been the experience of many local government with area-specific DCCs that funds tend to accumulate slowly with the effect of small balances in several accounts. Under a municipal-wide scenario, the monies could be pooled together and might be significant enough to complete at least one capital project. With area-specific charges, it has been the experience that less DCC projects were completed than desired. From this perspective, if certain required DCC projects cannot be funded, development may be delayed as a consequence.

However, a municipal-wide DCC may not be possible in all cases. For example, where "greenfield" developments are covered under a Land Use Contract, these areas may be excluded from DCCs. Another situation where area-specific DCCs may be the only option is when the utilities are organized into Specified Areas by bylaw under section 646 of the *Local*

Government Act. In both examples, the underlying principle is that developments cannot be "double charged."

Options for Road DCCs

Municipal-wide road DCCs

The foundation for a road DCC program is a municipality's Master Transportation Plan (or equivalent), often referenced in the OCP. The objective of a Transportation Plan is to provide an integrated network of arterial, collector, and local roads which enables the effective and efficient movement of people driving on any road within a municipality.

In fact, traffic from a new development in one area may contribute to the need for widening of an arterial road at the opposite end of the municipality. Thus, in addition to the general criteria, the nature of road usage is a specific consideration with respect to road DCCs. Therefore, the recommended best practice for the extent of application for road charges is to establish road DCCs on a municipal-wide basis for the following reasons:

- the nature of road usage (i.e., a fair reflection of the relationship between those who pay the DCC and benefiting users);
- bylaw simplicity (therefore reducing the opportunity of errors when determining the amount payable);
- reduced administrative effort;
- facilitation of cash flow; and,
- funding flexibility.

Recommended Best Practice

Road DCCs should be established on a municipal-wide basis, unless a significant disparity exists between those who pay the DCC and benefiting users.

Area-specific road DCCs

In certain limited circumstances, an area-specific road DCC may be reasonable. One example is a truck route within a well defined, non-residential area exclusively utilized by industrial land uses. In this case, an argument could be made for an area-specific industrial DCC, as the project would be more equitably funded, assuming there was very limited benefit to broader areas.

Options for Storm Drainage DCCs

The challenge in implementing storm drainage DCCs on a municipal-wide or area-specific basis is to strike a balance between the simplicity of one common set of rates and fair distribution of costs amongst benefiting catchment basins.

Area-specific storm drainage DCCs

The nature of storm drainage is such that capital works are required in direct response to the needs of a particular drainage catchment area or basin. The foundation for the storm drainage DCC program is the municipality's Master Drainage Plan or Stormwater Management Plan for each drainage basin, and the drainage requirements of one basin might be very different from another. If this is the case, consideration should be given to imposing storm drainage DCCs an area-specific basis. Another situation where an area-specific approach would be appropriate is when a municipality has organized the provision of storm drainage in specified service areas (e.g., drainage districts).

Municipal-wide storm drainage DCCs

If the topography of a municipality contains many drainage basins, a separate set of DCCs for each one may make calculation of charges complicated and future implementation of the bylaw very cumbersome. For example, an estimate of new development would be required for each drainage basin. Separate accounts would be required for each area DCC to track revenues and expenses. If the capital cost burdens for the drainage basins are similar, the recent trend has been to impose an equal charge over the entire municipality. In addition, drainage projects such as major trunk storm sewers and community stormwater detention facilities serving multiple drainage basins would be better suited to a municipal-wide DCC program.

Recommended Best Practice

Storm drainage DCCs should be established on a municipal-wide basis, unless a significant disparity exists between those who pay the DCC and benefiting users.

Government Act. In both examples, the underlying principle is that developments cannot be "double charged."

Options for Road DCCs

Municipal-wide road DCCs

The foundation for a road DCC program is a municipality's Master Transportation Plan (or equivalent), often referenced in the OCP. The objective of a Transportation Plan is to provide an integrated network of arterial, collector, and local roads which enables the effective and efficient movement of people driving on any road within a municipality.

In fact, traffic from a new development in one area may contribute to the need for widening of an arterial road at the opposite end of the municipality. Thus, in addition to the general criteria, the nature of road usage is a specific consideration with respect to road DCCs. Therefore, the recommended best practice for the extent of application for road charges is to establish road DCCs on a municipal-wide basis for the following reasons:

- the nature of road usage (i.e., a fair reflection of the relationship between those who pay the DCC and benefiting users);
- bylaw simplicity (therefore reducing the opportunity of errors when determining the amount payable);
- reduced administrative effort;
- facilitation of cash flow; and,
- funding flexibility.

Recommended Best Practice

Road DCCs should be established on a municipal-wide basis, unless a significant disparity exists between those who pay the DCC and benefiting users.

Area-specific road DCCs

In certain limited circumstances, an area-specific road DCC may be reasonable. One example is a truck route within a well defined, non-residential area exclusively utilized by industrial land uses. In this case, an argument could be made for an area-specific industrial DCC, as the project would be more equitably funded, assuming there was very limited benefit to broader areas.

Options for Storm Drainage DCCs

The challenge in implementing storm drainage DCCs on a municipal-wide or area-specific basis is to strike a balance between the simplicity of one common set of rates and fair distribution of costs amongst benefiting catchment basins

Area-specific storm drainage DCCs

The nature of storm drainage is such that capital works are required in direct response to the needs of a particular drainage catchment area or basin. The foundation for the storm drainage DCC program is the municipality's Master Drainage Plan or Stormwater Management Plan for each drainage basin, and the drainage requirements of one basin might be very different from another. If this is the case, consideration should be given to imposing storm drainage DCCs an area-specific basis. Another situation where an area-specific approach would be appropriate is when a municipality has organized the provision of storm drainage in specified service areas (e.g., drainage districts).

Municipal-wide storm drainage DCCs

If the topography of a municipality contains many drainage basins, a separate set of DCCs for each one may make calculation of charges complicated and future implementation of the bylaw very cumbersome. For example, an estimate of new development would be required for each drainage basin. Separate accounts would be required for each area DCC to track revenues and expenses. If the capital cost burdens for the drainage basins are similar, the recent trend has been to impose an equal charge over the entire municipality. In addition, drainage projects such as major trunk storm sewers and community stormwater detention facilities serving multiple drainage basins would be better suited to a municipal-wide DCC program.

Recommended Best Practice

Storm drainage DCCs should be established on a municipal-wide basis, unless a significant disparity exists between those who pay the DCC and benefiting users.

Rationale for recommended best practice for storm drainage DCCs
Unless there is a significant disparity in terms of either the projected new development units or the capital cost of providing storm drainage infrastructure between drainage basins, the recommended best practice for the extent of application related to storm drainage is to establish these DCCs on a municipal-wide basis for the following reasons:

- facilitation of cash flow;
- funding flexibility;
- bylaw simplicity; and,
- reduced administrative effort.

In other words, the benefits of these criteria outweigh consideration of the nature of storm drainage occurring in distinct basins, unless the principle of fairness and equity is significantly compromised. In particular, local government have found that collection of DCCs according to various drainage areas has resulted in an insufficient accumulation of funds to keep up with the need for drainage infrastructure.

Options for Sanitary DCCs
The arguments related to the options for storm drainage also apply to sanitary DCCs. While the nature of sanitary sewer systems is such that capital works are required in direct response to a particular catchment area, this feature must be balanced with other considerations.

Area-specific sanitary DCCs
An area-specific approach acknowledges the nature of sanitary sewer systems. If the sanitary requirements (from a municipality's Master Sewerage Plan or equivalent) between the various catchments differ greatly, imposing sanitary DCCs with this approach is appropriate.

Sanitary DCCs on an area-specific basis should also be considered, when the municipality has organized the provision of sanitary sewer in specified service areas (e.g., sewer districts)

Municipal-wide sanitary DCCs
Where the sewer subsystems of a municipality are well integrated with sewage lift stations discharging into one regional treatment facility, the sanitary projects may be better suited to a municipal-wide DCC program. In addition, where many catchment areas exist in the municipality with similar sewerage needs, the recent trend has been to impose a municipal-wide charge.

Recommended Best Practice

Sanitary DCCs should be established on a municipal-wide basis, unless a significant disparity exists between those who pay the DCC and benefiting users.

Rationale for recommended best practice for sanitary DCCs
The recommended best practice for the extent of application regarding sanitary sewer is to establish these DCCs on a municipal-wide basis. The rationale for this practice is similar to the considerations associated with storm drainage discussed previously.

Options for Water DCCs
Area-specific water DCCs
Water DCCs on an area-specific basis may be reasonable in limited situations, depending on the circumstances. For example, if the provision of water is separated into various geographic service areas or special development areas (e.g., a specified water area), and these areas effectively behave as isolated systems, then area-specific water DCCs would be appropriate.

Municipal-wide water DCCs
Municipal water systems consist of interconnected grids throughout the municipality. In this way, the nature of water distribution networks is very similar to a road system. This feature of water systems is a specific consideration in addition to the general criteria presented at the beginning of this section. The recommended best practice for the extent of application for water DCCs is to establish them on a municipal-wide basis for the following reasons:

- the nature of water distribution networks (i.e., a fair reflection of the relationship between those who pay the DCC and benefiting users);
- bylaw simplicity (therefore reducing the opportunity for errors when determining the amount payable);

- reduced administrative effort;
- facilitation of cash flow; and,
- funding flexibility.

Recommended Best Practice

Water DCCs should be established on a municipal-wide basis, unless a significant disparity exists between those who pay and benefiting users.

Options for Parkland DCCs

Recommended best practice

The recommended best practice for the extent of application in the case of parkland charges is to establish parkland DCCs on a municipal-wide basis. The rationale for this practice includes the following considerations:

- new users in one neighbourhood are not prevented from frequenting park and recreational facilities elsewhere;
- bylaw simplicity (therefore reducing the opportunity for errors when determining the amount payable);
- reduced administrative effort;
- facilitation of cash flow; and,
- funding flexibility.

Recommended Best Practice

Parkland DCCs should be established on a municipal-wide basis, unless a significant disparity exists between those who pay the DCC and benefiting users.

It is conceivable that a park might serve a specific neighbourhood with little benefit to other neighbourhoods, however local parks may be acquired using means other than DCCs. Therefore, an area-specific approach to parkland DCCs would seldom be appropriate.

Program Time Frame

The appropriate time frame for the DCC program should be considered when developing a DCC bylaw. A certain time period is needed for looking at the estimation of new development and the capital projects required to service that new development. To this end, DCC programs can be established on either a "**build out**" or a "**revolving**" basis.

A Build Out Program

A "build out" program by definition, includes all the DCC projects which will need to be constructed to allow development to occur to the full extent and level defined by the OCP. The OCP usually involves a long time horizon, and the Plan may not be fully realized for 20 or 25 years.

A Revolving Program

A revolving program is also consistent with the OCP but consists of only those projects which are necessary to support development that is expected to occur in some defined time period such as five or ten years. In effect, a number of sequential revolving time windows together make up a build out program.

Criteria for Decision-making

Considerations regarding the decision to establish a build out or revolving program include:

- the type of capital projects in the DCC program (e.g., a sewage treatment plant would probably be constructed to build out service population);
- cash flow requirements for DCC project construction, as monies may be collected faster with a shorter term program;
- the availability of long range plans for municipal servicing and land use;
- cost sharing equity between developers over time;
- DCC rate stability over time, as a revolving program may result in sharp increases/decreases;
- flexibility to use DCC funds for projects where the timing has been advanced;
- time and locational sensitivity of development projections; and,
- co-ordinating the time frame of the DCC program with the interval of time between major reviews of the OCP or the time period for a major amendment of the DCC and Zoning Bylaws.

Rationale for recommended best practice for storm drainage DCCs
Unless there is a significant disparity in terms of either the projected new development units or the capital cost of providing storm drainage infrastructure between drainage basins, the recommended best practice for the extent of application related to storm drainage is to establish these DCCs on a municipal-wide basis for the following reasons:

- facilitation of cash flow;
- funding flexibility;
- bylaw simplicity; and,
- reduced administrative effort.

In other words, the benefits of these criteria outweigh consideration of the nature of storm drainage occurring in distinct basins, unless the principle of fairness and equity is significantly compromised. In particular, local government have found that collection of DCCs according to various drainage areas has resulted in an insufficient accumulation of funds to keep up with the need for drainage infrastructure.

Options for Sanitary DCCs
The arguments related to the options for storm drainage also apply to sanitary DCCs. While the nature of sanitary sewer systems is such that capital works are required in direct response to a particular catchment area, this feature must be balanced with other considerations.

Area-specific sanitary DCCs
An area-specific approach acknowledges the nature of sanitary sewer systems. If the sanitary requirements (from a municipality's Master Sewerage Plan or equivalent) between the various catchments differ greatly, imposing sanitary DCCs with this approach is appropriate.

Sanitary DCCs on an area-specific basis should also be considered, when the municipality has organized the provision of sanitary sewer in specified service areas (e.g., sewer districts)

Municipal-wide sanitary DCCs
Where the sewer subsystems of a municipality are well integrated with sewage lift stations discharging into one regional treatment facility, the sanitary projects may be better suited to a municipal-wide DCC program. In addition, where many catchment areas exist in the municipality with similar sewerage needs, the recent trend has been to impose a municipal-wide charge.

Recommended Best Practice

Sanitary DCCs should be established on a municipal-wide basis, unless a significant disparity exists between those who pay the DCC and benefiting users.

Rationale for recommended best practice for sanitary DCCs
The recommended best practice for the extent of application regarding sanitary sewer is to establish these DCCs on a municipal-wide basis. The rationale for this practice is similar to the considerations associated with storm drainage discussed previously.

Options for Water DCCs
Area-specific water DCCs
Water DCCs on an area-specific basis may be reasonable in limited situations, depending on the circumstances. For example, if the provision of water is separated into various geographic service areas or special development areas (e.g., a specified water area), and these areas effectively behave as isolated systems, then area-specific water DCCs would be appropriate.

Municipal-wide water DCCs
Municipal water systems consist of interconnected grids throughout the municipality. In this way, the nature of water distribution networks is very similar to a road system. This feature of water systems is a specific consideration in addition to the general criteria presented at the beginning of this section. The recommended best practice for the extent of application for water DCCs is to establish them on a municipal-wide basis for the following reasons:

- the nature of water distribution networks (i.e., a fair reflection of the relationship between those who pay the DCC and benefiting users);
- bylaw simplicity (therefore reducing the opportunity for errors when determining the amount payable);

- reduced administrative effort;
- facilitation of cash flow; and,
- funding flexibility.

> ***Recommended Best Practice***
>
> *Water DCCs should be established on a municipal-wide basis, unless a significant disparity exists between those who pay and benefiting users.*

Options for Parkland DCCs
Recommended best practice
The recommended best practice for the extent of application in the case of parkland charges is to establish parkland DCCs on a municipal-wide basis. The rationale for this practice includes the following considerations:

- new users in one neighbourhood are not prevented from frequenting park and recreational facilities elsewhere;
- bylaw simplicity (therefore reducing the opportunity for errors when determining the amount payable);
- reduced administrative effort;
- facilitation of cash flow; and,
- funding flexibility.

> ***Recommended Best Practice***
>
> *Parkland DCCs should be established on a municipal-wide basis, unless a significant disparity exists between those who pay the DCC and benefiting users.*

It is conceivable that a park might serve a specific neighbourhood with little benefit to other neighbourhoods, however local parks may be acquired using means other than DCCs. Therefore, an area-specific approach to parkland DCCs would seldom be appropriate.

Program Time Frame

The appropriate time frame for the DCC program should be considered when developing a DCC bylaw. A certain time period is needed for looking at the estimation of new development and the capital projects required to service that new development. To this end, DCC programs can be established on either a "**build out**" or a "**revolving**" basis.

A Build Out Program
A "build out" program by definition, includes all the DCC projects which will need to be constructed to allow development to occur to the full extent and level defined by the OCP. The OCP usually involves a long time horizon, and the Plan may not be fully realized for 20 or 25 years.

A Revolving Program
A revolving program is also consistent with the OCP but consists of only those projects which are necessary to support development that is expected to occur in some defined time period such as five or ten years. In effect, a number of sequential revolving time windows together make up a build out program.

Criteria for Decision-making
Considerations regarding the decision to establish a build out or revolving program include:

- the type of capital projects in the DCC program (e.g., a sewage treatment plant would probably be constructed to build out service population);
- cash flow requirements for DCC project construction, as monies may be collected faster with a shorter term program;
- the availability of long range plans for municipal servicing and land use;
- cost sharing equity between developers over time;
- DCC rate stability over time, as a revolving program may result in sharp increases/decreases;
- flexibility to use DCC funds for projects where the timing has been advanced;
- time and locational sensitivity of development projections; and,
- co-ordinating the time frame of the DCC program with the interval of time between major reviews of the OCP or the time period for a major amendment of the DCC and Zoning Bylaws.

Recommended Best Practice

The time frame for a DCC program should be tied into the time frame of the Capital Expenditure Program or financial plan.

Beyond these considerations, reference is made to two other DCC issues: DCC recoverable costs and future bylaw administration. With respect to the former, the capital cost component should be consistent with the DCC time period. For example, the full costs associated with and ultimate standard of construction (e.g., a multi-phased arterial road project) to be achieved within the next 20 years should not be included in a five year revolving DCC program. In this case, only the interim standard envisioned to be constructed in the next five years should be included in the immediate revolving program. Regarding the future administration of the bylaw, the time frame of the DCC program may impact how the various projects are monitored and tracked.

The inability to estimate future project costs adequately often makes creation of a build out program difficult. For road DCCs, long range corridors have to be sufficiently defined in the Master Transportation Plan. The level of information available from background stormwater management plans and studies, from sanitary sewer modelling and master sewerage plans, from water modelling studies, and from the Parks Master Plan and park policies in the OCP will affect whether compiling a build out program is feasible. However, a build out approach offers the most flexibility in relation to development sequencing and project construction timing, since all the projects needed to support build out of the entire OCP are included in the DCC program.

Categories of Land Use to be Charged

Section 934 (3) of the *Local Government Act* provides the authorization for DCCs to be imposed according to:

- different zones or different defined or specified areas;
- different uses; and,
- different classes of development.

In response to this provision, another policy consideration involves establishing the types of development to be charged DCCs. Land uses can include both residential and non-residential development. Although the legislation permits different DCCs for different types of development, it is noted that charges cannot be differentiated by ownership. For example, a private school would be charged the same institutional DCC rate as a public school.

The categories of development to be charged may depend on the choice of a municipal-wide or area-specific DCC application, as charges cannot be imposed for land uses which do not benefit from the DCC program.

Types of Land Use

Residential uses commonly include single family and multi-family (such as duplex, townhouse, and apartment), while non-residential uses can typically include commercial, industrial, and institutional. "De-coupling" the categories of land use to be charged DCCs (e.g., residential) from an associated building form (e.g., single family residence, townhouse, apartment) has been suggested by some local governments. Instead, residential land use is only distinguished on the basis of unit density. Proponents argue that this approach results in fairer charges and may promote more efficient land development. A fuller discussion of the density approach is provided in the subsection on "Level of Category Breakdown."

While DCCs could potentially be imposed on all categories of development which benefit from the installation of roads, drainage, sanitary, and water services, the applicability of parkland DCCs to non-residential land uses is not as clear. Some have argued that only residential development creates a need for park and open space, therefore commercial, industrial, and institutional land uses should not be charged parkland DCCs. Others believe that parks and other amenities form part of the attractiveness that cause businesses to locate in a particular municipality, therefore non-residential land uses should contribute to the costs of these facilities. In addition, employees can enjoy the use of parks during lunch hours and breaks. Sometimes, companies sponsor employee sports teams which utilize civic park facilities.

Recommended Best Practice

The time frame for a DCC program should be tied into the time frame of the Capital Expenditure Program or financial plan.

Beyond these considerations, reference is made to two other DCC issues: DCC recoverable costs and future bylaw administration. With respect to the former, the capital cost component should be consistent with the DCC time period. For example, the full costs associated with and ultimate standard of construction (e.g., a multi-phased arterial road project) to be achieved within the next 20 years should not be included in a five year revolving DCC program. In this case, only the interim standard envisioned to be constructed in the next five years should be included in the immediate revolving program. Regarding the future administration of the bylaw, the time frame of the DCC program may impact how the various projects are monitored and tracked.

The inability to estimate future project costs adequately often makes creation of a build out program difficult. For road DCCs, long range corridors have to be sufficiently defined in the Master Transportation Plan. The level of information available from background stormwater management plans and studies, from sanitary sewer modelling and master sewerage plans, from water modelling studies, and from the Parks Master Plan and park policies in the OCP will affect whether compiling a build out program is feasible. However, a build out approach offers the most flexibility in relation to development sequencing and project construction timing, since all the projects needed to support build out of the entire OCP are included in the DCC program.

Categories of Land Use to be Charged

Section 934 (3) of the *Local Government Act* provides the authorization for DCCs to be imposed according to:

- different zones or different defined or specified areas;
- different uses; and,
- different classes of development.

In response to this provision, another policy consideration involves establishing the types of development to be charged DCCs. Land uses can include both residential and non-residential development. Although the legislation permits different DCCs for different types of development, it is noted that charges cannot be differentiated by ownership. For example, a private school would be charged the same institutional DCC rate as a public school.

The categories of development to be charged may depend on the choice of a municipal-wide or area-specific DCC application, as charges cannot be imposed for land uses which do not benefit from the DCC program.

Types of Land Use

Residential uses commonly include single family and multi-family (such as duplex, townhouse, and apartment), while non-residential uses can typically include commercial, industrial, and institutional. "De-coupling" the categories of land use to be charged DCCs (e.g., residential) from an associated building form (e.g., single family residence, townhouse, apartment) has been suggested by some local governments. Instead, residential land use is only distinguished on the basis of unit density. Proponents argue that this approach results in fairer charges and may promote more efficient land development. A fuller discussion of the density approach is provided in the subsection on "Level of Category Breakdown."

While DCCs could potentially be imposed on all categories of development which benefit from the installation of roads, drainage, sanitary, and water services, the applicability of parkland DCCs to non-residential land uses is not as clear. Some have argued that only residential development creates a need for park and open space, therefore commercial, industrial, and institutional land uses should not be charged parkland DCCs. Others believe that parks and other amenities form part of the attractiveness that cause businesses to locate in a particular municipality, therefore non-residential land uses should contribute to the costs of these facilities. In addition, employees can enjoy the use of parks during lunch hours and breaks. Sometimes, companies sponsor employee sports teams which utilize civic park facilities.

Ultimately, the assessment of the need for and enjoyment of park and open space by the different land uses must be justified.

Imposing DCCs on institutional land use is also difficult. Often, information that would assist in the projection of institutional development does not exist. Most of the data have to be obtained from other agencies which may or may not have planning documents in place. In addition, the actual demand on services greatly varies, depending on the actual use. For example, a government office building may have sewer loadings very similar to commercial land use, while a school or hospital may have much greater loads.

The nature of institutional land use may be different from other types of development. For example, new arrangements such as public/private partnerships for the provision of institutional facilities or new co-operative relationships emerging between municipal parks departments and school boards were not originally envisioned, when the DCC legislation was introduced.

Further, public sector developers feel that the need for institutional development is a consequence of population growth; new infrastructure required to service institutional land uses is in response to other types of development and therefore should be exempt from DCCs.

Conversely, it can be argued that institutional land uses do impact infrastructure systems, and despite the difficulties, it is possible to derive DCCs for institutional land use.

Level of Category Breakdown

A DCC bylaw should reflect sufficient land use categories to reflect the development patterns for which the DCC servicing program is being provided, but should not be so detailed that the process of DCC preparation and administration becomes cumbersome. It is noted that as the number of categories increase, the complexity of the bylaw also increases, in terms of calculating the charges, continued administrative effort, and the opportunity for errors in determining the amount payable. Similar to the "averaging" discussion when referring to a municipal-wide or area-specific DCC program, the challenge in determining the degree to which land use categories should be broken down is to balance the principle of fairness and equity with the benefits of simplicity.

The decision as to how detailed the breakdown of the categories of development should be, for the purpose of setting a DCC, is essentially one that acknowledges "density" subsets within each basic land use category. The relative benefit received between various types of land use is directly related to the density of new development, whether it is expressed as persons per dwelling unit, a per capita demand, equivalent service population, or the size of the unit. For example, different types of residential land use impact the road network differently. To recognize the differences in relative impact, DCCs can be implemented for various residential uses such as rural, single family, low density multi-family, and high density multi-family. In the case of storm drainage, though not considered "density" per se, the amount of impervious area does indeed vary between different types of new development.

It is suggested that specification of land uses should be somewhat generalized, and DCC categories should not be directly referenced to zoning designations in the Zoning Bylaw. The reason for this is that these designations frequently change; DCC rates specified by land use zones would mean that a DCC bylaw amendment would be necessary with every additional zoning designation created. However, the Zoning Bylaw should provide the definition of what uses constitute "residential," "commercial," "industrial," and "institutional."

Residential land use categories

Historically, a strong connection existed between building form and the residential land uses for which DCCs were imposed. Therefore, building forms such as a single family residence, townhouse, and/or apartment were used to reflect the subset within the basic land use category of residential, and these building forms were an adequate proxy to reflect impact on infrastructure services. Recently, certain housing trends have been noticed; the size of single family residences appears to be decreasing in certain locales (sometimes referred to as "small lot development" or "compact housing"), while some very large multi-family units have shown up on the market. It is now possible to find townhouses and condominiums that match the size of smaller single family dwellings. Assuming that the demand on services from a large multi-family unit might be equal to that for a small single family dwelling, DCCs may not be the most equitably distributed, if imposed according to building type.

In response to the recent housing trends, two approaches are described in this subsection as matters of policy which should be considered when developing a DCC bylaw.

The traditional approach presumes that the strong tie between building form and impact on infrastructure continues to exist. As a result, a typical range of land use categories for the implementation of DCCs includes:

- Single Family Residential;
- Multi-family Residential; or possibly
- Townhouse;
- Low Rise Apartment; and,
- High Rise Apartment.

Additional land uses that are less common but are potential DCC categories include rural residential, duplex, mobile home pads, and secondary suites. Some guidance in the choice of development categories may be provided by the OCP which defines generalized land use for the municipality and in the Zoning Bylaw which describes more specific land use zone designations.

The main advantage of the traditional approach is that the data needed to make the unit projections corresponding to the land use categories are often readily available. For example, building statistics and Census information often track development trends on the basis of building form (e.g., ground oriented, single detached). Disadvantages of this approach include perhaps not recognizing recent development trends and the view that it may not encourage the building of smaller dwelling units.

Alternatively, an innovative approach reflects the recent housing trends that have seen the building of smaller single family dwellings and larger multi-family units. This approach suggests that the link between DCC categories and building form should be "de-coupled," and the subset within residential land use should be based on a density gradient.

The cutoff between the various density categories would be at the discretion of the municipality, but as an example, some potential ranges (as set out in the School Site Acquisition Charge Regulation) are suggested below:

- "low density" means up to 21 self-contained dwelling units on a gross hectare;
- "medium low density" means 21 to 50 self-contained dwelling units on a gross hectare;
- "medium density" means 51 to 125 self-contained dwelling units on a gross hectare;
- "medium high density" means 126 to 200 self-contained dwelling units on a gross hectare; and,
- "high density" means over 200 self-contained dwelling units on a gross hectare.

Instead of a density gradient, the City of Richmond uses a "sliding scale". For further information, contact the Corporate Services Department, City of Richmond at (604) 276-4095.

The main advantage of the alternative density gradient approach is that it may promote more efficient land development. Neo-traditional planning principles point out that compact forms and higher density contribute to sustainability, as these types of development reduce the amount of roads built, make transit more viable, and have smaller "ecological footprints." The disadvantage of being innovative is that data required to make development projections may not be easily available in the format desired. Therefore, building statistics and Census information may have to be used as a starting point with fine-tuning being done based on what is known about the trend for the number of units per hectare in specific areas in recent times.

As well, the lot size may be factored into DCC calculations. Lot size does contribute to housing affordability but this saving might be partially offset if DCCs are not allocated equitably. Certainly it can be shown that smaller lot sizes have less impact on storm drainage. It may be more difficult to produce definitive data that a smaller lot leads to trip reduction or reduced sewer and water usage, but logic would suggest there would sometimes be a reduced impact.

The Ministry's position is that existing legislation does not preclude factoring small lot size into DCC calculations.

The traditional building form approach, when coupled with DCC rates collected on the basis of floor area for multi-family units (see floorspace option, page 24) and DCC rates varying with lot size for single family units, can offer the majority of the advantages of a strict density gradient approach without the associated disadvantages of uncertainty and lack of development projection data.

Non-residential land use categories
The degree that non-residential land uses are broken down in a DCC bylaw is rarely as great as for residential. Although the same general considerations apply, the typical types of non-residential land use categories for which DCCs are imposed include:

- Commercial (possibly broken down further into Service Commercial or Office Commercial);
- Industrial (possibly broken down further into Light Industrial and Heavy Industrial); and,
- Institutional.

Due to the wide range of demand on services that exists for various types of institutional development, fairer charges will result, if this land use is further broken down into the types of development that are projected to occur over the DCC time period. Depending on each municipality, the institutional uses may include:

- government offices;
- elementary schools;
- secondary schools;
- private schools;
- universities and colleges;
- hospitals including private care facilities; and,
- senior or low cost housing (depending on the Zoning Bylaw).

However, due to the problems associated with institutional DCCs as previously discussed, it may be difficult to establish more than one institutional category.

Recommended best practice
The recommended best practice for determining the manner in which DCCs will be set for residential land use is to establish the charge categories according to a density gradient. In this case, the ease in which a DCC bylaw can be developed according to building forms is considered to be "traded off" for the principle of fairness and equity.

Regarding non-residential development, the breakdown of categories within a certain land use for which DCCs are payable should recognize major differences in relative impact, as determined by a municipality.

Recommended Best Practice

Residential DCC categories should be established according to a density gradient. The breakdown of categories within non-residential land uses for which DCCs are payable should recognize major differences in relative impact.

Appropriate Units for Charges

Section 934 (3) of the *Local Government Act* further states that a DCC bylaw may be imposed for different sizes or different numbers of lots or units in a development. In other words, the bylaw establishes DCC rates for representative units of development for each identified category of land use. Therefore, the representative unit should be an accepted measure of development. This choice will affect how development projections are made and what information is required in order to make reasonable projections.

Units for Residential Land Uses

Development unit option
In practice, frequently used units for residential DCCs include "lots" for single family and "dwelling units" for multi-family such as townhouses and apartments. The advantage of this option is that in many local government, development projections are commonly expressed in these terms.

Floorspace option
DCCs on a floorspace basis for residential development are encouraged by the development industry. Although not as widely implemented as lots or dwelling units, DCCs based on square footage (or square metres) remain an option. In a community where the size of residential units does not vary widely,

The traditional building form approach, when coupled with DCC rates collected on the basis of floor area for multi-family units (see floorspace option, page 24) and DCC rates varying with lot size for single family units, can offer the majority of the advantages of a strict density gradient approach without the associated disadvantages of uncertainty and lack of development projection data.

Non-residential land use categories
The degree that non-residential land uses are broken down in a DCC bylaw is rarely as great as for residential. Although the same general considerations apply, the typical types of non-residential land use categories for which DCCs are imposed include:

- Commercial (possibly broken down further into Service Commercial or Office Commercial);
- Industrial (possibly broken down further into Light Industrial and Heavy Industrial); and,
- Institutional.

Due to the wide range of demand on services that exists for various types of institutional development, fairer charges will result, if this land use is further broken down into the types of development that are projected to occur over the DCC time period. Depending on each municipality, the institutional uses may include:

- government offices;
- elementary schools;
- secondary schools;
- private schools;
- universities and colleges;
- hospitals including private care facilities; and,
- senior or low cost housing (depending on the Zoning Bylaw).

However, due to the problems associated with institutional DCCs as previously discussed, it may be difficult to establish more than one institutional category.

Recommended best practice
The recommended best practice for determining the manner in which DCCs will be set for residential land use is to establish the charge categories according to a density gradient. In this case, the ease in which a DCC bylaw can be developed according to building forms is considered to be "traded off" for the principle of fairness and equity.

Regarding non-residential development, the breakdown of categories within a certain land use for which DCCs are payable should recognize major differences in relative impact, as determined by a municipality.

Recommended Best Practice

Residential DCC categories should be established according to a density gradient. The breakdown of categories within non-residential land uses for which DCCs are payable should recognize major differences in relative impact.

Appropriate Units for Charges

Section 934 (3) of the *Local Government Act* further states that a DCC bylaw may be imposed for different sizes or different numbers of lots or units in a development. In other words, the bylaw establishes DCC rates for representative units of development for each identified category of land use. Therefore, the representative unit should be an accepted measure of development. This choice will affect how development projections are made and what information is required in order to make reasonable projections.

Units for Residential Land Uses

Development unit option
In practice, frequently used units for residential DCCs include "lots" for single family and "dwelling units" for multi-family such as townhouses and apartments. The advantage of this option is that in many local government, development projections are commonly expressed in these terms.

Floorspace option
DCCs on a floorspace basis for residential development are encouraged by the development industry. Although not as widely implemented as lots or dwelling units, DCCs based on square footage (or square metres) remain an option. In a community where the size of residential units does not vary widely,

calculation of rates in this manner may be very appropriate. Further, as multi-family DCCs are commonly collected at the time of building permit issuance, an area unit of measure is certainly compatible with this type of land use. "habitable area" is defined as the area which can be lived in, but does not include patios, balconies, garages, parking stalls or storage areas other than closet space.

Local governments which have implemented the floorspace option for multi-family units have found no significant difficulties with it and have remarked upon how easy it is to administer and how easily understandable to the layperson it is. Additionally, the square footage option has proven to be a more accurate measure of "habitable area" and also leads to a more useful and less complicated DCC calculation. Development of a square footage scheme can require additional supporting data, so it may be a good idea to engage a consultant.

In recognition that the construction industry, construction material industry and the general public use imperial measurement, it is recommended that local government DCC bylaws contain an imperial to metric conversion table where bylaws use metric (i.e. floorspace in square metres; density in units per hectare).

Units for Non-residential Land Uses

For non-residential land use, an area unit of measure is also often used. For commercial, industrial, and institutional uses, the applicable area can be expressed in square metres (or square footage) of gross building area or hectares (or acres) of gross site area. Typically, floorspace area is chosen for commercial and institutional (because these types of development are often multi-storied), while gross site area is more common for industrial (which is predominantly a single storey development).

Other Options

The number of bedrooms or the number of required parking spaces are much less common ways of levying DCCs. In very special circumstances, these unit measures may be appropriate. However, it is important for equity and ease of implementation that the unit of development be representative, an accepted unit of measure, and easily understood.

Criteria for Decision-making

So that the best choice overall to facilitate bylaw administration can be made, affected parties should be consulted regarding the representative unit, including:

- the development industry who will be paying the DCC; and,
- the municipality's "front line" staff that deal with subdivision and building permit applications and who will be determining the amount payable.

It is noted that different units can be applied to different charge categories. For example, single family DCCs could be charged on a lot basis, while multi-family DCCs could be imposed on the basis of floorspace.

Beyond administration issues, the appropriate unit for DCCs may affect housing affordability, a mandated consideration contained in the *Local Government Act* (section 934 (4) (d) (iii)). A 1995 study completed by the Urban Development Institute (UDI) in co-operation with the District of Maple Ridge argues that DCCs based on the size of the dwelling unit would encourage the construction of smaller homes to enhance housing choices and affordability.

With a DCC levied on the number of lots or dwelling units, the charge compared to the overall development costs is a higher percentage, as the number of units increase. In an attempt to maximize profits, developers may tend to build larger and more expensive units, therefore making housing less affordable.

The UDI study assumes a link between the size of the unit and the number of occupants. And by implication, a strong connection between unit size and overall service demand is also assumed. The study concludes that the prevailing practice of charges based on lots or dwelling units should be continued, but where feasible, DCCs on an area basis should be considered.

It is unclear whether the size of a dwelling unit is indeed directly proportional to the number of occupants, thereby affecting overall service demand. In particular with larger sized homes, these dwellings may simply be reflecting lifestyle preferences, and the demand on services may not necessarily increase in proportion to the size of the dwelling unit. DCCs must be based on direct or indirect provision of services, not on the ability to pay. While further research is required to determine how housing affordability is impacted by DCCs levied on an area basis, a contributing factor to the municipality's preference for a development unit based DCC is how the *Local Government Act* stipulates the collection of charges.

As most single family lots are created by subdivision (with the exception of areas experiencing redevelopment), single family DCCs are typically payable upon subdivision approval. At this point, the areas of the buildings are often unknown, so the number of lots is an easy way of assessing the total charge payable. Collection of DCCs at the building permit stage facilitates charges levied according to floorspace. However, the disadvantage to the municipality is the provision in the Act which exempts DCC payment for permits for less than four self-contained residential dwelling units (section 933(4)(b)(i)). The collection of DCCs is further discussed in Chapter 3.

Recommended best practice
In consideration of the above criteria as well as the previous section on "Categories of Land Use to be Charged," the following are the recommended best practices related to the appropriate units for DCCs:

- to facilitate charges imposed on a density gradient, residential DCCs should be established on a development unit basis;
- for commercial and institutional land uses, DCCs should be established on a floorspace basis; and,
- for industrial land use, DCCs should be established on a gross site area basis.

Recommended Best Practice

To facilitate charges based on a density gradient, residential DCCs should be imposed on a development unit basis, For commercial and institutional DCCs, floorspace should be used as the representative unit, while for industrial land use, DCCs should be established on a gross site area basis.

Project Eligibility

As mentioned in Chapter 1, section 933 (2) of the *Local Government Act* contains the provision that allows local government to use DCCs to assist in the payment of capital costs associated with:

- providing;
- constructing;
- altering; or,
- expanding sewage, water, drainage, and highway facilities.

The same section also allows for DCCs to assist in:

- providing; and,
- improving parkland.

In all cases, the projects must directly or indirectly service new development.

Infrastructure and park projects can be financed by various means such as:

- DCCs;
- general revenues;
- government grants;
- long term debt through a borrowing bylaw;
- utility reserves;
- developer funded under a Servicing Agreement;
- Specified Area Bylaw;
- Local Improvement Programs (LIPs); or,
- Latecomer Agreements, as specified in section 939 of the *Local Government Act*.

In October 2000, the Ministry of Municipal Affairs published the *Development Finance Choices Guide* which describes these options in more depth.

As this best practices guide is not intended to describe all aspects of municipal financing, these funding arrangements are briefly mentioned here only as it relates to DCCs, and relevant points include:

- LIP projects are generally not included in a DCC program;
- projects constructed under a Latecomers Agreement are not DCC eligible, nor are DCC funded projects eligible for Latecomer Agreements;

direct or indirect provision of services, not on the ability to pay. While further research is required to determine how housing affordability is impacted by DCCs levied on an area basis, a contributing factor to the municipality's preference for a development unit based DCC is how the *Local Government Act* stipulates the collection of charges.

As most single family lots are created by subdivision (with the exception of areas experiencing redevelopment), single family DCCs are typically payable upon subdivision approval. At this point, the areas of the buildings are often unknown, so the number of lots is an easy way of assessing the total charge payable. Collection of DCCs at the building permit stage facilitates charges levied according to floorspace. However, the disadvantage to the municipality is the provision in the Act which exempts DCC payment for permits for less than four self-contained residential dwelling units (section 933(4)(b)(i)). The collection of DCCs is further discussed in Chapter 3.

Recommended best practice
In consideration of the above criteria as well as the previous section on "Categories of Land Use to be Charged," the following are the recommended best practices related to the appropriate units for DCCs:

- to facilitate charges imposed on a density gradient, residential DCCs should be established on a development unit basis;
- for commercial and institutional land uses, DCCs should be established on a floorspace basis; and,
- for industrial land use, DCCs should be established on a gross site area basis.

Recommended Best Practice

To facilitate charges based on a density gradient, residential DCCs should be imposed on a development unit basis, For commercial and institutional DCCs, floorspace should be used as the representative unit, while for industrial land use, DCCs should be established on a gross site area basis.

Project Eligibility

As mentioned in Chapter 1, section 933 (2) of the *Local Government Act* contains the provision that allows local government to use DCCs to assist in the payment of capital costs associated with:

- providing;
- constructing;
- altering; or,
- expanding sewage, water, drainage, and highway facilities.

The same section also allows for DCCs to assist in:

- providing; and,
- improving parkland.

In all cases, the projects must directly or indirectly service new development.

Infrastructure and park projects can be financed by various means such as:

- DCCs;
- general revenues;
- government grants;
- long term debt through a borrowing bylaw;
- utility reserves;
- developer funded under a Servicing Agreement;
- Specified Area Bylaw;
- Local Improvement Programs (LIPs); or,
- Latecomer Agreements, as specified in section 939 of the *Local Government Act*.

In October 2000, the Ministry of Municipal Affairs published the *Development Finance Choices Guide* which describes these options in more depth.

As this best practices guide is not intended to describe all aspects of municipal financing, these funding arrangements are briefly mentioned here only as it relates to DCCs, and relevant points include:

- LIP projects are generally not included in a DCC program;
- projects constructed under a Latecomers Agreement are not DCC eligible, nor are DCC funded projects eligible for Latecomer Agreements;

- works constructed along the immediate frontage of land being developed to a "Local" standard are normally constructed (and paid for) by the developer of the land (section 938 of the *Local Government Act*); but any oversizing beyond the "Local" standard (i.e., the incremental capacity between local and trunk needs) can be included in a DCC program, unless such oversizing is funded through an LIP; and,
- projects which are related to the ongoing maintenance of existing infrastructure (such as a manhole rehabilitation program, watermain flushing, street repairs, storm sewer cleaning, or replacement due to ages) should not be included.

DCC programs generally consist of off-site, trunk or major services and utilities servicing neighbourhood or community-wide needs. As stated previously, DCC programs are based on master servicing plans for respective utilities, and DCC projects make up only part of the financial plan or the capital expenditure program.

With the exceptions of parkland improvements and the exclusion of off street parking, the *Local Government Act* does not provide any further guidance as to the type of works that can be included in a DCC program. Therefore, some specific considerations for each particular utility are outlined in the following subsections.

Road Projects

With respect to highway projects, only off-street parking facilities are specifically excluded from a road DCC program. However, in keeping with the intent of the charges, a road DCC program typically consists of transportation network elements such as Arterial and Major Collector Roads. Local and Minor Collector Roads are generally not included, as these roads are often constructed by frontage developments as a requirement of subdivision approval. In practice, the road DCC program is an outcome of master transportation planning, and "highway works" have been interpreted to include the following:

- master transportation planning work;
- roads;
- sidewalks and pedestrian facilities;
- traffic signals and controls;
- boulevards and boulevard landscaping;
- noise attenuation structures;
- medians;
- curb and gutter;
- street lighting;
- underground wiring;
- drainage facilities within roadways;
- pedestrian and highway bridges;
- intersection channelization;
- transit provisions such as bus pull-ins; and,
- bicycle/pedestrian infrastructure.

A large road project may be broken down into sub-projects or phases to be carried out at different times or under different accounts. For example:

- design;
- road right-of-way acquisition;
- interim standard road;
- final widening; and,
- top lift pavement course.

In the case where a Major Collector Road provides the primary frontage for, and access to, a land development project, only the "oversizing" component of the road should be included in the DCC program, that is, the difference between the "Local" and "Collector" street standard. The developer is required to bear the cost of the "Local" road equivalent.

Storm Drainage Projects

Regarding a storm drainage DCC program, "drainage facilities" have been interpreted, in practice, to include projects such as:

- preparation of master stormwater management plans;
- drainage rights-of-way and easement acquisition;
- large diameter storm sewer;
- major culvert crossings;
- overland flow routing systems;
- community retention/detention facilities;
- watercourse erosion protection works;
- lowland drainage improvements (including dyking); and,
- pumping stations.

An oversizing component can also be included in a storm drainage DCC program as an alternative to a Latecomer Agreement. For example, if a trunk sewer required to serve new development runs along a street, and this sewer also provides service to a land development project along the frontage, the incremental cost between the local and trunk requirements known as "oversizing" may be included in a DCC program. Meanwhile, the local sewer requirement is borne by the developer of the land.

Sanitary Projects
For a sanitary DCC program, "sewage facilities" have been interpreted, in practice, to include the following typical projects:

- master sewerage planning;
- sanitary rights-of-way and easement acquisition;
- trunk sanitary sewer;
- relief sewers;
- facility oversizing;
- sewage lift stations; and,
- sewage treatment facilities.

Facility "oversizing" means the incremental cost between local and trunk requirements. For example, if a trunk sewer required to serve new development runs along a street, and this sewer also provides service to a land development project along the frontage, the Developer is responsible for the local need. Only the oversizing component should be included in the sanitary DCC program.

Wastewater treatment facilities may also be included, if not the separate mandate of a regional district or greater board. Where the jurisdiction for wastewater treatment lies outside the municipality, separate DCCs can be imposed by that jurisdiction. In that case, the municipality will be governed by the regional DCC bylaw and shall simply collect and remit the funds to the regional district or greater board.

Water Projects
With regard to "water facilities," the legislation has been commonly interpreted to mean that a water DCC program may consist of water supply and distribution projects including:

- water distribution modeling;
- water rights-of-way and easement acquisition;
- trunk or grid watermains;
- facility oversizing;
- booster pump stations;
- reservoirs;
- water treatment facilities; and,
- pressure reducing valve (PRV) stations.

Similar to storm drainage and sanitary sewer, facility oversizing is the difference between the local and trunk requirements. Where a large diameter grid watermain fronts a land development project, and the same watermain also provides local service, the oversizing component may be included in a water DCC program. It is assumed that the cost of providing the local servicing need is paid by the developer of the land.

Similar to wastewater treatment, water treatment facilities may also be included, if such services are the responsibility of the municipality. Where separate DCCs are imposed by another jurisdiction, the municipality will simply collect and remit the funds to that body, such as a regional district or greater board.

Parkland Acquisition and Improvement Projects
While section 933 (2) (b) of the *Local Government Act* generally mentions "providing" and "improving," sections 935 (3) (b) and 936 provide some clarification to the conditions that make parkland acquisition and improvements eligible for a parkland DCC program. See also Circular No. 97:04 Parkland Development Cost Charges, 1997 (Appendix D).

Regarding parkland acquisition, the land must:

- have a location and character acceptable to local government; and,
- have a market value that is at least equal to the amount of the charge (section 936 (2)).

Regarding parkland improvements, works are limited to:

- fencing;
- landscaping;
- drainage and irrigation;
- trails;
- restrooms;
- changing rooms;
- playground equipment; and,
- playing field equipment (section 935 (3) (b) (ii)).

In practice, a parkland acquisition and improvement program is required, before parkland DCCs can be calculated. Not unlike the DCC programs for roads, drainage, sewer, and water, a strong relationship exists between the DCC bylaw and other municipal documents such as the OCP; in fact, the context for the DCC program comes from the broader municipal plans.

Given this setting, guidance for compiling a parkland acquisition and improvement program can come from the OCP, the Parks Master Plan, and/or other provisions found in the *Local Government Act*. The OCP often broadly specifies park, recreation, and open space objectives. Sometimes, even certain park sites might be described. Acceptable standards for active park and passive open space are usually defined in a Parks Master Plan.

In the same manner that storm drainage, sewer, and water can be constructed under LIPs and Latecomer Agreements, there are means of funding parkland and open space acquisition other than through the use of DCC funds. Though not intended to be a comprehensive discussion, each are briefly described below to help clarify how a park acquisition program could be created for DCC purposes. A good understanding of *Local Government Act* provisions is important, since certain means, such as dedication at subdivision and development permit protection for parks have a greater impact on the DCC program than, for example, LIPs on the road program.

Section 941 of the Act provides the authority for local government to require land being subdivided to dedicate up to 5% of the parcel for parkland, or gives the owner the option to make an equivalent cash-in-lieu payment. This provision is applicable to any subdivision which creates three or more additional lots. Thus parkland acquired in this manner must be taken into account when evaluating parkland requirements. Although not mandated by the legislation, some local government waive the dedication requirement, or a "credit" is given towards parkland DCCs in the case that a program exists for parkland acquisition.

Section 879 (1) of the Act gives local government the authority in an OCP to designate areas within a Development Permit Area (DPA) for the protection of the natural environment and from hazardous conditions. This provision is generally used to preserve natural habitat and environmentally sensitive areas or to protect development from hazardous areas such as unstable slopes and flooding. Note that through the use of development permits, open space is protected from development and thus preserved, although not necessarily dedicated as municipal parkland. This method of parkland "acquisition" is most appropriate for unusable or undevelopable open space, rather than for active parkland space. Therefore, this type of land should not included in a DCC program, as it could be obtained through DPAs or some other mechanism.

When compiling a parkland acquisition DCC program, DCCs should not be used to make up past deficiencies in parkland. For example, DCC funds should not be used to acquire parkland in an older area of the municipality which is not experiencing new development. In the case where a parkland deficiency exists, parkland acquisition funding must come from general revenue or means other than DCCs.

DCC monies may be used to acquire parkland in older areas experiencing redevelopment, such as the conversion of single family dwellings to multi-family developments. A local government can buy back municipally owned properties as parkland, if these lands would have otherwise been sold for development. DCC funds may also be applied to parkland that provides municipality-wide benefit derived as a result of new development experienced throughout the municipality.

Lastly, the Inspector of Municipalities is presently constrained by the type of narrow definition one would find in a dictionary for parkland improvements such as fencing, landscaping, trails, etc. Reference is made to Ministry Circular No. 97:04 issued February 25, 1997 with respect to the current definition of parkland improvements. (Appendix D)

Recoverable DCC Costs

Further to the types of projects that are eligible for DCC programs, the recoverable DCC costs for those projects must also be considered. There is a strong correlation between the capital projects in the DCC programs and the financial plan or CEP as applicable. Therefore, cost estimates should be consistent with these plans.

According to the *Local Government Act*, the recoverable capital costs associated with DCC projects include planning, engineering, and legal. (A provision has been built into the legislation to allow interest costs approved by the Inspector of Municipalities but this provision has not yet been brought into force.) In practice, this section has been interpreted by MMA to include any or all of the following scope of capitalized activities:

- planning;
- public consultation;
- engineering design;
- right-of-way or parkland acquisition;
- legal costs;
- interim financing;
- contract administration;
- construction;
- contingencies; and,
- Goods and Services Tax (GST) (net 3% for local governments).

Recommended Best Practice

DCC recoverable costs should be clearly identified in the DCC documentation and must be consistent with Ministry provisions.

Interim financing is the short-term debt financed by the local government prior to the receipt of contributions from other sources, such as government grants, and this financing cost is recoverable through DCCs.

As a matter of Ministry policy, inflation and long term debt financing are not considered eligible for DCC recovery. However, section 935 (3) (c) of the *Local Government Act* does allow funds in DCC reserve accounts to be used to pay for the interest and principal on a debt resulting from DCC project costs. Also a provision has been built into the legislation to allow interest costs approved by the Inspector of Municipalities but this provision has not yet been brought into force.

Large DCC projects involving more than one utility or service, multi-year funding, and/or various funding sources can be broken down into separate phases to simplify DCC administration and accounting. Projects may be entirely or partly funded through DCCs, however in a revolving DCC program, costs should be included only for the phase(s) which are proposed in that time period.

Municipal Assist Factor

Section 933 (2) of the *Local Government Act* states that the purpose of DCCs is to provide funds to "assist" the local government to pay the costs of municipal parks and infrastructure. By not allowing 100% of the development related costs to be charged to new development, the legislation implicitly requires an "assist factor." As a matter of Ministry policy, a requirement exists for local government to provide a level of financial assistance. The municipal assist factor is separate from any allocation of costs made between new development and existing users. No guidance is provided by the Ministry as to the magnitude of the assist factor; some local government have set it as low as 1% (i.e., 99% of the development related capital costs are borne through DCCs), while others have set it as high as 50%. This factor reflects Council's desire to encourage development and is largely a political decision.

Recommended Best Practice

The municipal assist factor is a discretionary vehicle which should be a reflection of the community's financial support towards the financing of services for development.

The municipal assist factor may be amended from time to time to ensure that the DCC does not deter development, however each adjustment will require bylaw amendment and approval from the Ministry.

Although council has the flexibility to use the municipal assist factor as a political instrument, Ministry policy does limit how the assist factor is to be applied in two ways. The factor can only be varied between different categories of infrastructure. For example, an assist factor of 10% could be applied to roads, while 5% could be applied to sanitary sewer. In addition, the factor must be consistent within that category of infrastructure or specified service area. As an illustration of this point, road DCCs for all land uses must have the same assist factor; for example, a municipality could not offer 10% assistance for single family lots and 25% assistance to commercial developments (nor 10% to Area A and 25% to Area B). These

legislation to allow interest costs approved by the Inspector of Municipalities but this provision has not yet been brought into force.) In practice, this section has been interpreted by MMA to include any or all of the following scope of capitalized activities:

- planning;
- public consultation;
- engineering design;
- right-of-way or parkland acquisition;
- legal costs;
- interim financing;
- contract administration;
- construction;
- contingencies; and,
- Goods and Services Tax (GST) (net 3% for local governments).

Recommended Best Practice

DCC recoverable costs should be clearly identified in the DCC documentation and must be consistent with Ministry provisions.

Interim financing is the short-term debt financed by the local government prior to the receipt of contributions from other sources, such as government grants, and this financing cost is recoverable through DCCs.

As a matter of Ministry policy, inflation and long term debt financing are not considered eligible for DCC recovery. However, section 935 (3) (c) of the *Local Government Act* does allow funds in DCC reserve accounts to be used to pay for the interest and principal on a debt resulting from DCC project costs. Also a provision has been built into the legislation to allow interest costs approved by the Inspector of Municipalities but this provision has not yet been brought into force.

Large DCC projects involving more than one utility or service, multi-year funding, and/or various funding sources can be broken down into separate phases to simplify DCC administration and accounting. Projects may be entirely or partly funded through DCCs, however in a revolving DCC program, costs should be included only for the phase(s) which are proposed in that time period.

Municipal Assist Factor

Section 933 (2) of the *Local Government Act* states that the purpose of DCCs is to provide funds to "assist" the local government to pay the costs of municipal parks and infrastructure. By not allowing 100% of the development related costs to be charged to new development, the legislation implicitly requires an "assist factor." As a matter of Ministry policy, a requirement exists for local government to provide a level of financial assistance. The municipal assist factor is separate from any allocation of costs made between new development and existing users. No guidance is provided by the Ministry as to the magnitude of the assist factor; some local government have set it as low as 1% (i.e., 99% of the development related capital costs are borne through DCCs), while others have set it as high as 50%. This factor reflects Council's desire to encourage development and is largely a political decision.

Recommended Best Practice

The municipal assist factor is a discretionary vehicle which should be a reflection of the community's financial support towards the financing of services for development.

The municipal assist factor may be amended from time to time to ensure that the DCC does not deter development, however each adjustment will require bylaw amendment and approval from the Ministry.

Although council has the flexibility to use the municipal assist factor as a political instrument, Ministry policy does limit how the assist factor is to be applied in two ways. The factor can only be varied between different categories of infrastructure. For example, an assist factor of 10% could be applied to roads, while 5% could be applied to sanitary sewer. In addition, the factor must be consistent within that category of infrastructure or specified service area. As an illustration of this point, road DCCs for all land uses must have the same assist factor; for example, a municipality could not offer 10% assistance for single family lots and 25% assistance to commercial developments (nor 10% to Area A and 25% to Area B). These limitations have been placed on the assist factor, as it was not designed as a tool to encourage or discourage any category of development over another.

Criteria for Decision-making
While council is ultimately responsible for setting the municipal assist factor, the following points are suggested for consideration:

- Varying municipal assist factors between different types of infrastructure may complicate tracking and ensuring the municipal contribution at the accounting level.

- Although excessive DCCs are obviously of concern (section 934 (4) (d)), DCCs should be calculated using the best technical information possible. If as a consequence of this process, the resulting charges are deemed to be too high, the assist factor can then be applied by council to reduce the rates to a level that is politically acceptable.

- A high assist factor could be used to encourage housing affordability.

- The total municipal contribution to projects is the sum of the component not attributed to new development (amount representing benefit to existing users), the portion of costs associated with types of development which are exempt from DCCs (e.g., building permits for less than four units), and the assist factor. Therefore, a high assist factor has direct impact on municipal finances, and the contribution must be made up by the existing tax base through general revenue as long term debt, utility rates, etc.

- And, if the municipality cannot afford its share of the costs, development may be delayed. If this scenario is anticipated over the long term, it should be used to inform a future review of the OCP.

Social Housing Provisions

Under Bill 88, the *Local Government Statutes Amendment Act* 1999, section 933 of the *Local Government Act* was amended to include a permissive authority allowing local governments to provide assistance to non-profit rental housing developers by waiving or reducing the development cost charge. However, social housing units must still be considered a part of the total housing count.

Also the intent of the legislation is that in cases where the DCC is waived or reduced, the amount waived is to be entirely supported by the existing development.

3. BYLAW ADMINISTRATION

Once the Inspector of Municipalities has granted the DCC Bylaw statutory approval and council or regional district board has adopted the bylaw, ongoing administration will be required. This chapter describes a number of policy considerations associated with the continued use and maintenance of the DCC bylaw, namely the collection of charges (upon subdivision approval or building permit issuance), monitoring and accounting, grace periods and instream applications, credits and rebates, and the process for bylaw amendment.

Collection of Charges

Section 933 (5) of the *Local Government Act* states that DCCs are payable at the time of an approval of subdivision or at issuance of building permit, as the case may be. Further, clause (6) of the same section authorizes payment of DCCs in instalments and allows local governments to prescribe the conditions under which instalments may be paid. In practice, charges are commonly collected:

- at the subdivision approval stage for single family charges;
- upon issuance of a building permit for multi-family, commercial and institutional DCCs;
- at subdivision approval or building permit issuance for industrial DCCs; and,
- in three equal instalments, when such phasing of payments is desired.

BC Regulation 166/84, Development Cost Charge (Instalments) Regulation outlines specific details of the timing of DCC payments by a developer (See Appendix C).

Collection at Subdivision Approval

As the required trunk services must be constructed before buildings are connected, local government would prefer to impose all DCCs at the time of subdivision approval. Payment at this time allows funds to accumulate earlier in the development process and supports the notion that local government should not have to front end the costs of installing infrastructure needed to service new development. Philosophically, levying DCCs at this point coincides with when funds are needed to install the required services, although in fact, a "flow through" of funds serves to offset this need somewhat.

In addition, the advantage of instream protection is provided to those paying DCCs at subdivision approval. When a DCC bylaw is adopted, section 943 of the *Local Government Act* offers a twelve month protection period for instream applications from the effects of the new bylaw. This provision is described later in this chapter.

Recommended Best Practice

DCCs for single family developments should be collected at the time of subdivision approval.

Subdivision approval is a convenient stage for a municipality to collect the charges for single family development (and duplex). Further, it is a logical time, if the lots are predominantly created by subdivision (e.g., greenfield developments). Frequently at this point in the development process, only the total area of the subdivision and the number of lots created are known. Most likely, the building areas of the units have not yet been finalized. Therefore, if single family DCCs are levied on a per lot or per lot area basis, the total DCCs can easily be levied at subdivision approval. If single family DCCs are levied according to floorspace, the total DCCs payable would be difficult to determine, as the information would not be readily available. For all of the above reasons, single family DCCs should be collected at the time of subdivision approval.

Despite the municipality's preference, collecting DCCs at the subdivision approval stage may not be possible for other land uses. Multi-family subdivisions do occur, but the actual yield of dwelling units may vary greatly, depending on zoning regulations. Thus, it may be impractical to assess multi-family DCCs at subdivision approval, regardless of whether the charges are based on dwelling units or building area.

3. BYLAW ADMINISTRATION

Once the Inspector of Municipalities has granted the DCC Bylaw statutory approval and council or regional district board has adopted the bylaw, ongoing administration will be required. This chapter describes a number of policy considerations associated with the continued use and maintenance of the DCC bylaw, namely the collection of charges (upon subdivision approval or building permit issuance), monitoring and accounting, grace periods and instream applications, credits and rebates, and the process for bylaw amendment.

Collection of Charges

Section 933 (5) of the *Local Government Act* states that DCCs are payable at the time of an approval of subdivision or at issuance of building permit, as the case may be. Further, clause (6) of the same section authorizes payment of DCCs in instalments and allows local governments to prescribe the conditions under which instalments may be paid. In practice, charges are commonly collected:

- at the subdivision approval stage for single family charges;
- upon issuance of a building permit for multi-family, commercial and institutional DCCs;
- at subdivision approval or building permit issuance for industrial DCCs; and,
- in three equal instalments, when such phasing of payments is desired.

BC Regulation 166/84, Development Cost Charge (Instalments) Regulation outlines specific details of the timing of DCC payments by a developer (See Appendix C).

Collection at Subdivision Approval

As the required trunk services must be constructed before buildings are connected, local government would prefer to impose all DCCs at the time of subdivision approval. Payment at this time allows funds to accumulate earlier in the development process and supports the notion that local government should not have to front end the costs of installing infrastructure needed to service new development. Philosophically, levying DCCs at this point coincides with when funds are needed to install the required services, although in fact, a "flow through" of funds serves to offset this need somewhat.

In addition, the advantage of instream protection is provided to those paying DCCs at subdivision approval. When a DCC bylaw is adopted, section 943 of the *Local Government Act* offers a twelve month protection period for instream applications from the effects of the new bylaw. This provision is described later in this chapter.

Recommended Best Practice

DCCs for single family developments should be collected at the time of subdivision approval.

Subdivision approval is a convenient stage for a municipality to collect the charges for single family development (and duplex). Further, it is a logical time, if the lots are predominantly created by subdivision (e.g., greenfield developments). Frequently at this point in the development process, only the total area of the subdivision and the number of lots created are known. Most likely, the building areas of the units have not yet been finalized. Therefore, if single family DCCs are levied on a per lot or per lot area basis, the total DCCs can easily be levied at subdivision approval. If single family DCCs are levied according to floorspace, the total DCCs payable would be difficult to determine, as the information would not be readily available. For all of the above reasons, single family DCCs should be collected at the time of subdivision approval.

Despite the municipality's preference, collecting DCCs at the subdivision approval stage may not be possible for other land uses. Multi-family subdivisions do occur, but the actual yield of dwelling units may vary greatly, depending on zoning regulations. Thus, it may be impractical to assess multi-family DCCs at subdivision approval, regardless of whether the charges are based on dwelling units or building area.

Commercial and industrial subdivisions can also occur, and non-residential DCCs are commonly charged on an area basis. If these charges are based on gross site area, the total DCCs could be calculated at subdivision approval. If the charges are based on building area, it may be impractical to collect DCCs upon subdivision approval, as once again, the building area may not be known. Institutional subdivisions are very rare, and it is unlikely to be charged at this point in the development process.

It is noted that non-residential developers often do not completely develop their sites all at once. Therefore, it may be unfair to require DCCs for the entire site to be paid at subdivision, when the first stage of site development is constructed. On the other hand, the required services may be installed several years before any building proceeds. Despite the flow through of funds, the municipality may be effectively front ending the capital improvements, if the charges are collected at building permit stage.

Collection at Building Permit Issuance

The development industry strongly supports deferral of all DCC payments to at least the building permit stage. The development industry believes that building permit issuance is a logical time for DCCs to be paid, as other fees are paid at this stage as well.

The current legislation may constrain local governments from collecting DCCs at the building permit stage. Section 933 (4) (b) of the *Local Government Act* specifies that municipalities collecting the charges at the time of building permit issuance cannot do so for permits associated with construction of less than four dwelling units. Thus, if payment of DCCs were deferred from subdivision approval to building permit stage, the potential revenues from subdivisions involving less than four dwelling units would be lost. This exemption is seen by many to be a barrier to levying single family (and duplex) DCCs at the issuance of a building permit.

Recommended Best Practice

DCCs for multi-family and non-residential land uses should be collected at the time of building permit issuance.

With respect to multi-family charges, the loss of revenues from the "less than four" exemption has been accepted due to the following practical limitations.

- Multi-family subdivisions are relatively infrequent, compared to single family developments.
- If these charges are based on floorspace, the total payable is difficult to determine at subdivision.

For non-residential land uses, the "less than four" exemption does not apply (section 933 (4) (b) (ii)). DCCs should be collected upon issuance of building permit, since the representative unit upon which DCCs are frequently levied (i.e., floorspace) allows the total charges to be easily calculated at this point in the development process.

Monitoring and Accounting

Section 937 (5) of the *Local Government Act* states that the Inspector of Municipalities may require the local governments to provide a report on the status of DCC collections, expenditures, and proposed expenditures. Further, a transfer of funds from a DCC reserve fund to a capital works reserve fund may be ordered (section 937 (6)). In fact, the Inspector has the power to revoke statutory approval of the DCC bylaw, if things are not found to be in order.

Section 935 (1) of the Act stipulates that DCCs shall be deposited in a separate special DCC reserve fund established for each purpose, for which a local government imposes a charge. The monies collected (together with reserve fund interest) shall then be used to pay for the capital projects within a DCC program, with one minor exception. Section 936 (6) implies that the interest earned on parkland DCCs may be used for parkland improvements, not directly or indirectly related to new development.

In practice, ongoing administration of the DCC bylaw should be guided by the principles of transparency in the process and integrated implementation. Monitoring of DCC funds and accountability as to their use are largely achieved through good "housekeeping" practices that are clear and understandable.

Recommended Best Practice

A DCC monitoring and accounting system should be set up such that tracking of projects and the financial status of DCC accounts can easily be facilitated.

DCC accounts should be set up in a manner that assists in tracking of projects, capital expenditures, sources of funding, and status of completion. Identification numbers given to each capital project in the DCC program may help facilitate ongoing administration of the bylaw. Tools such as spreadsheets are also helpful. The DCC accounting system should be able to report:

- how much money has been collected from DCCs;
- the amount of government grants received towards DCC projects;
- amounts designated as DCC "credits" or "rebates"; and,
- the amount of funds representing the local government share of project costs in the DCC program.

Thus, a good DCC accounting system will indicate whether sufficient DCC funds are being collected to complete the DCC program in accordance with development projections (and indeed to determine if the OCP is being achieved). Early indication of inadequate/excess DCC funds will allow local governments to respond with adjustments to their servicing plans.

Thus, tracking and monitoring of DCCs should be facilitated by the management and financial reports generated by the accounting system. These reports will be used as fundamental inputs to the bylaw amendment process (discussed further in this chapter) involving:

- identification of completed projects;
- addition of new projects;
- interest earned;
- under/overages;
- reconciliation of figures; and,
- revision of project costs.

Grace Periods and Instream Applications

When a municipality implements or amends a DCC bylaw, developers or those parties paying DCCs will be affected by the new charges. For a developer, project funding is usually arranged early in the development process (even before rezoning, if required). Therefore, stability of DCC rates and how projects in progress are affected have a great impact on the viability of land development. A valid subdivision or building permit application would pay the DCC rates applicable at the time of application.

Grace periods and instream applications are important policy issues which should be considered when administering a DCC bylaw. Since DCCs may be imposed upon approval of a subdivision or upon authorization of a building permit, guidelines should be established with respect to how grace periods and instream applications will be handled in each situation.

Grace Periods

A grace period is a length of time offered as notification that new DCCs will be in effect. For example, the DCC bylaw may state that the effective date will be ninety days (or six months, as the case may be) from the date of bylaw adoption. The grace period is granted by a municipality as an acknowledgement of the impact DCCs may have on the development industry. As the formulation of DCCs becomes standardized and transparent with the use of this guide, the need for the grace period may be reduced.

Recommended Best Practice

A suitable period of notification before a new DCC bylaw is in effect, known as a grace period, should be considered when establishing DCC rates.

Subdivision Applications

Section 943 of the *Local Government Act* provides instream protection of one year from the proposed DCC rates for subdivision applications, provided that the application is complete and that subdivision application fees have been paid. In other words, given a

Commercial and industrial subdivisions can also occur, and non-residential DCCs are commonly charged on an area basis. If these charges are based on gross site area, the total DCCs could be calculated at subdivision approval. If the charges are based on building area, it may be impractical to collect DCCs upon subdivision approval, as once again, the building area may not be known. Institutional subdivisions are very rare, and it is unlikely to be charged at this point in the development process.

It is noted that non-residential developers often do not completely develop their sites all at once. Therefore, it may be unfair to require DCCs for the entire site to be paid at subdivision, when the first stage of site development is constructed. On the other hand, the required services may be installed several years before any building proceeds. Despite the flow through of funds, the municipality may be effectively front ending the capital improvements, if the charges are collected at building permit stage.

Collection at Building Permit Issuance
The development industry strongly supports deferral of all DCC payments to at least the building permit stage. The development industry believes that building permit issuance is a logical time for DCCs to be paid, as other fees are paid at this stage as well.

The current legislation may constrain local governments from collecting DCCs at the building permit stage. Section 933 (4) (b) of the *Local Government Act* specifies that municipalities collecting the charges at the time of building permit issuance cannot do so for permits associated with construction of less than four dwelling units. Thus, if payment of DCCs were deferred from subdivision approval to building permit stage, the potential revenues from subdivisions involving less than four dwelling units would be lost. This exemption is seen by many to be a barrier to levying single family (and duplex) DCCs at the issuance of a building permit.

Recommended Best Practice

DCCs for multi-family and non-residential land uses should be collected at the time of building permit issuance.

With respect to multi-family charges, the loss of revenues from the "less than four" exemption has been accepted due to the following practical limitations.

- Multi-family subdivisions are relatively infrequent, compared to single family developments.
- If these charges are based on floorspace, the total payable is difficult to determine at subdivision.

For non-residential land uses, the "less than four" exemption does not apply (section 933 (4) (b) (ii)). DCCs should be collected upon issuance of building permit, since the representative unit upon which DCCs are frequently levied (i.e., floorspace) allows the total charges to be easily calculated at this point in the development process.

Monitoring and Accounting

Section 937 (5) of the *Local Government Act* states that the Inspector of Municipalities may require the local governments to provide a report on the status of DCC collections, expenditures, and proposed expenditures. Further, a transfer of funds from a DCC reserve fund to a capital works reserve fund may be ordered (section 937 (6)). In fact, the Inspector has the power to revoke statutory approval of the DCC bylaw, if things are not found to be in order.

Section 935 (1) of the Act stipulates that DCCs shall be deposited in a separate special DCC reserve fund established for each purpose, for which a local government imposes a charge. The monies collected (together with reserve fund interest) shall then be used to pay for the capital projects within a DCC program, with one minor exception. Section 936 (6) implies that the interest earned on parkland DCCs may be used for parkland improvements, not directly or indirectly related to new development.

In practice, ongoing administration of the DCC bylaw should be guided by the principles of transparency in the process and integrated implementation. Monitoring of DCC funds and accountability as to their use are largely achieved through good "housekeeping" practices that are clear and understandable.

Recommended Best Practice

A DCC monitoring and accounting system should be set up such that tracking of projects and the financial status of DCC accounts can easily be facilitated.

DCC accounts should be set up in a manner that assists in tracking of projects, capital expenditures, sources of funding, and status of completion. Identification numbers given to each capital project in the DCC program may help facilitate ongoing administration of the bylaw. Tools such as spreadsheets are also helpful. The DCC accounting system should be able to report:

- how much money has been collected from DCCs;
- the amount of government grants received towards DCC projects;
- amounts designated as DCC "credits" or "rebates"; and,
- the amount of funds representing the local government share of project costs in the DCC program.

Thus, a good DCC accounting system will indicate whether sufficient DCC funds are being collected to complete the DCC program in accordance with development projections (and indeed to determine if the OCP is being achieved). Early indication of inadequate/excess DCC funds will allow local governments to respond with adjustments to their servicing plans.

Thus, tracking and monitoring of DCCs should be facilitated by the management and financial reports generated by the accounting system. These reports will be used as fundamental inputs to the bylaw amendment process (discussed further in this chapter) involving:

- identification of completed projects;
- addition of new projects;
- interest earned;
- under/overages;
- reconciliation of figures; and,
- revision of project costs.

Grace Periods and Instream Applications

When a municipality implements or amends a DCC bylaw, developers or those parties paying DCCs will be affected by the new charges. For a developer, project funding is usually arranged early in the development process (even before rezoning, if required). Therefore, stability of DCC rates and how projects in progress are affected have a great impact on the viability of land development. A valid subdivision or building permit application would pay the DCC rates applicable at the time of application.

Grace periods and instream applications are important policy issues which should be considered when administering a DCC bylaw. Since DCCs may be imposed upon approval of a subdivision or upon authorization of a building permit, guidelines should be established with respect to how grace periods and instream applications will be handled in each situation.

Grace Periods

A grace period is a length of time offered as notification that new DCCs will be in effect. For example, the DCC bylaw may state that the effective date will be ninety days (or six months, as the case may be) from the date of bylaw adoption. The grace period is granted by a municipality as an acknowledgement of the impact DCCs may have on the development industry. As the formulation of DCCs becomes standardized and transparent with the use of this guide, the need for the grace period may be reduced.

Recommended Best Practice

A suitable period of notification before a new DCC bylaw is in effect, known as a grace period, should be considered when establishing DCC rates.

Subdivision Applications

Section 943 of the *Local Government Act* provides instream protection of one year from the proposed DCC rates for subdivision applications, provided that the application is complete and that subdivision application fees have been paid. In other words, given a

scenario where the proposed DCCs have increased from the existing charges, an instream and active subdivision application will be exempted from the increased DCCs for one year from the date of adoption of the new bylaw. Although different local governments may have different requirements regarding what constitutes a complete application, one feature required to be eligible for the one year statutory exemption is that the application must be accepted for processing by the municipality's Approving Officer. If the developer has received a Letter of Conditional Approval of subdivision (or equivalent, such as "Preliminary Layout Approval"), section 943 also applies.

The proposed DCCs will apply to subdivisions under the following conditions:

- where an application has been denied;
- where Conditional Approval has lapsed during the one year exemption period; or,
- where final approval of subdivision has not been received prior to the anniversary date of the new bylaw.

It is noted that developers of multi-phased subdivisions should be especially aware of significant dates such as the date of DCC bylaw adoption, the bylaw's anniversary date, and the expiry date attached to the Letter of Conditional Approval.

Building Permit Applications

There are no *Local Government Act* provisions governing building permit applications similar to the instream protection offered to subdivision applications. Unless specified differently in a municipality's Building Permit Bylaw, the amount payable is determined in accordance with the rates applicable at the time of building permit application. Again, it is important for the applicant to note what constitutes a valid application, which may vary with different local governments.

As a result of recent legal case history, the instream protection policy for building permits is being reviewed by many local governments. Firstly, the courts have concluded that the date which the appropriate DCCs should be calculated is the date that sufficient information is available to issue the permit and not necessarily the actual date of building permit issuance.[1] Secondly, there is legal precedent which indicates that exemption from the bylaw on an arbitrary basis (such as an instream application) is discriminatory to other developers who do not meet that criteria.[2]

Historically, some local governments have chosen to offer instream protection for building permits from increased DCC rates resulting from a new DCC bylaw or bylaw amendment. However, the ruling of Acamar v. City of Surrey (1997) confirms the view that section 943 only applies to subdivision applications.[3]

The grace period should not be confused with instream protection. The former only serves to allow enough time for people to be notified of the new DCC rates; as it relates to building permit applications, the latter seeks to provide preferential treatment to developers meeting a certain time criteria.

Credits and Rebates

There are no specific references to "DCC credits" or "DCC rebates" in the *Local Government Act*. However, the intent of the Section 933 and specifically clause (8) is that developers providing trunk services beyond the development shall have those costs deducted from the applicable DCCs payable. To implement the provisions of the legislation, the concepts of a "DCC credit" and a "DCC rebate" are introduced. Policies regarding when a municipality should offer a credit versus a rebate should be carefully considered. In either case, the DCC accounting system should allow credits and rebates to be monitored and tracked.

Recommended Best Practice

A municipality should carefully consider the situations where a DCC credit or rebate should be given.

---

[1] Coho Creek Estates Ltd. V. District of Maple Ridge, (Supreme Court of B.C., Vancouver Registry No. C9018001)

[2] 356226 British Columbia v. City of Vancouver, (Supreme Court of B.C., Vancouver Registry No. C920828)

[3] Acamar Stoney Creek Development Inc. v. Surrey (City), (Supreme Court of B.C., Vancouver Registry No. A950192)

scenario where the proposed DCCs have increased from the existing charges, an instream and active subdivision application will be exempted from the increased DCCs for one year from the date of adoption of the new bylaw. Although different local governments may have different requirements regarding what constitutes a complete application, one feature required to be eligible for the one year statutory exemption is that the application must be accepted for processing by the municipality's Approving Officer. If the developer has received a Letter of Conditional Approval of subdivision (or equivalent, such as "Preliminary Layout Approval"), section 943 also applies.

The proposed DCCs will apply to subdivisions under the following conditions:

- where an application has been denied;
- where Conditional Approval has lapsed during the one year exemption period; or,
- where final approval of subdivision has not been received prior to the anniversary date of the new bylaw.

It is noted that developers of multi-phased subdivisions should be especially aware of significant dates such as the date of DCC bylaw adoption, the bylaw's anniversary date, and the expiry date attached to the Letter of Conditional Approval.

Building Permit Applications

There are no *Local Government Act* provisions governing building permit applications similar to the instream protection offered to subdivision applications. Unless specified differently in a municipality's Building Permit Bylaw, the amount payable is determined in accordance with the rates applicable at the time of building permit application. Again, it is important for the applicant to note what constitutes a valid application, which may vary with different local governments.

As a result of recent legal case history, the instream protection policy for building permits is being reviewed by many local governments. Firstly, the courts have concluded that the date which the appropriate DCCs should be calculated is the date that sufficient information is available to issue the permit and not necessarily the actual date of building permit issuance.[1] Secondly, there is legal precedent which indicates that exemption from the bylaw on an arbitrary basis (such as an instream application) is discriminatory to other developers who do not meet that criteria.[2]

Historically, some local governments have chosen to offer instream protection for building permits from increased DCC rates resulting from a new DCC bylaw or bylaw amendment. However, the ruling of Acamar v. City of Surrey (1997) confirms the view that section 943 only applies to subdivision applications.[3]

The grace period should not be confused with instream protection. The former only serves to allow enough time for people to be notified of the new DCC rates; as it relates to building permit applications, the latter seeks to provide preferential treatment to developers meeting a certain time criteria.

Credits and Rebates

There are no specific references to "DCC credits" or "DCC rebates" in the *Local Government Act*. However, the intent of the Section 933 and specifically clause (8) is that developers providing trunk services beyond the development shall have those costs deducted from the applicable DCCs payable. To implement the provisions of the legislation, the concepts of a "DCC credit" and a "DCC rebate" are introduced. Policies regarding when a municipality should offer a credit versus a rebate should be carefully considered. In either case, the DCC accounting system should allow credits and rebates to be monitored and tracked.

> ***Recommended Best Practice***
>
> ***A municipality should carefully consider the situations where a DCC credit or rebate should be given.***

---

[1] Coho Creek Estates Ltd. V. District of Maple Ridge, (Supreme Court of B.C., Vancouver Registry No. C9018001)
[2] 356226 British Columbia v. City of Vancouver, (Supreme Court of B.C., Vancouver Registry No. C920828)
[3] Acamar Stoney Creek Development Inc. v. Surrey (City), (Supreme Court of B.C., Vancouver Registry No. A950192)

DCC Credits
As discussed in the previous chapter on bylaw development, DCC programs are established in support of broader municipal plans. New development projections should be made in relation to OCP objectives. The DCC program should be compiled to service the new development in an orderly manner, and the capital projects should be a subset of the financial plan or CEP as applicable. Underlying the DCC calculations are various assumptions regarding the cost and timing of capital projects.

Despite the above, a situation may arise where a Developer desires to proceed with a land development before the required trunk services are installed in that area. This type of development can be considered to be "out of sequence." Philosophically, an out of sequence development should be carefully weighed in light of growth management objectives in the OCP. If the development is contrary to the objectives in the OCP, or if the municipality cannot afford the financial burden of additional infrastructure requirements, the Approving Officer of the municipality may seriously consider declining that development for the present time. If it is deemed that the out of sequence development should proceed, some flexibility may be available to accommodate the capital costs, depending on whether the charges have been implemented on a municipal-wide or area-specific basis. Another means of facilitating the development would be to require the developer to construct the necessary trunk services. The burden imposed on the developer by front ending the capital costs of these services, is essentially the consequence of "advancing history."

In this case, the out of sequence development would be offered a DCC credit. In other words, the costs of constructing the required trunk works and services in advance of the proposed timing, would be deducted from what otherwise would have been the applicable respective DCCs payable, but the DCC credit could not exceed the applicable DCC payable. For example, if the developer constructed a section of trunk sewer, the associated costs would be deducted from his sanitary DCCs, to the maximum DCC amount payable.

DCC Rebates
In the previous chapter on project eligibility, it was noted that facility oversizing was eligible for DCC cost recovery. In other words, the component of the capital costs between local and trunk requirements can be included in the DCC program. It is expected that developers would be responsible for the costs of providing the services to a local standard.

In the case where a developer wishes to proceed with a development before the trunk services fronting his property are installed in that area, a municipality might allow the developer to construct the required works to a trunk standard. Then, the municipality would offer a DCC rebate for the incremental portion of costs beyond the local requirement. Thus, the *Local Government Act* provisions prohibiting double charging are honoured.

Process for Bylaw Amendment

The average cost of a typical unit of development should not change significantly over time except for the effects of inflation or changes in standards, if development projections are accurate. However, due to the periodic revision of the OCP, the municipality's financial situation, changing infrastructure needs, and a host of other factors affecting new development which are beyond local government control, the DCC bylaw will require amendment from time to time.

The process for bylaw amendment is essentially the same as initial bylaw development (as discussed in previous chapters). Amendments to a DCC bylaw are also governed by the procedures outlined in section 937 of the *Local Government Act*, including the requirement for approval from the Inspector of Municipalities. In general, there are two levels of amendment: a minor adjustment to DCC rates to reflect inflation and a major DCC review.

Minor DCC Amendment
A minor amendment to the DCC bylaw is basically an adjustment to the charges to reflect current construction costs, fluctuations in land values, and the status of government grants. It is suggested that this type of amendment could be made annually following the annual review of the financial plan or CEP as applicable.

Recommended Best Practice

Minor amendments to the DCC bylaws should be made annually to reflect changes in construction costs, land values, and the status of government grants.

The following process has been used for minor update of DCCs to reflect inflation:

- prepare average unit rates from all the lowest bid construction tenders received during a calendar year;
- prepare year to year land price adjustments for parkland and road widening strips;
- apply these rates to a standardized generic construction project. One example would be an arterial road widening project;
- compare overall total costs between one year and the next to determine cost changes;
- apply appropriate cost change factors to the capital cost within the DCC calculation and recalculate the DCCs; and,
- submit revised bylaw to the Ministry of Municipal Affairs for a minor bylaw amendment.

Any proposed inflation adjustment methodologies must be pre-approved by the Ministry of Municipal Affairs. The example given above outlines a process that would be deemed reasonable by the Ministry. The Consumer Price Index cannot be justified for use as an inflation adjustment factor.

It is suggested that changes in construction costs could be reflected using a construction index such as the Composite Southam Construction Cost Index, the Engineering News Record Cost Indexes, or Statistics Canada Quarterly, Construction Price Statistics. This type of bylaw amendment would still require statutory approval. However, due to the nature of the adjustment, it is anticipated that Ministry approval of the bylaw amendment would be expedited.

Major DCC Amendment

A major bylaw amendment involves a full review of the DCC methodology including:

- underlying DCC assumptions;
- broad policy considerations;
- development projections;
- DCC program costs;
- timing of proposed capital projects;
- addition of new projects to the DCC program, where necessary; and,
- deletion from the DCC program of those capital projects that have been completed or are no longer required.

It is anticipated that a major DCC bylaw amendment is not required more often than once every five years, unless conditions which form the basis for the bylaw change. As DCCs are strongly linked to the OCP, a suitable opportunity for a full review of DCCs would be immediately following an OCP review. In fact, there is merit in building into a municipality's strategic planning process, a framework for sequential review of the OCP, the capital planning process, and the DCC bylaw. Two events which may trigger the need for a major review are:

- when a major change in DCC assumptions has occurred; and,
- when DCC revenues/expenditures deviate from projections by a certain established percentage.

Recommended Best Practice

Major amendments to the DCC bylaws should be completed at least once every five years involving a full review of DCC issues and methodology.

In a municipality where an ongoing public process has been established for addressing DCC issues, such as a DCC Advisory Forum, this group would provide valuable assistance in completing a comprehensive review.

Recommended Best Practice

Minor amendments to the DCC bylaws should be made annually to reflect changes in construction costs, land values, and the status of government grants.

The following process has been used for minor update of DCCs to reflect inflation:

- prepare average unit rates from all the lowest bid construction tenders received during a calendar year;
- prepare year to year land price adjustments for parkland and road widening strips;
- apply these rates to a standardized generic construction project. One example would be an arterial road widening project;
- compare overall total costs between one year and the next to determine cost changes;
- apply appropriate cost change factors to the capital cost within the DCC calculation and recalculate the DCCs; and,
- submit revised bylaw to the Ministry of Municipal Affairs for a minor bylaw amendment.

Any proposed inflation adjustment methodologies must be pre-approved by the Ministry of Municipal Affairs. The example given above outlines a process that would be deemed reasonable by the Ministry. The Consumer Price Index cannot be justified for use as an inflation adjustment factor.

It is suggested that changes in construction costs could be reflected using a construction index such as the Composite Southam Construction Cost Index, the Engineering News Record Cost Indexes, or Statistics Canada Quarterly, Construction Price Statistics. This type of bylaw amendment would still require statutory approval. However, due to the nature of the adjustment, it is anticipated that Ministry approval of the bylaw amendment would be expedited.

Major DCC Amendment

A major bylaw amendment involves a full review of the DCC methodology including:

- underlying DCC assumptions;
- broad policy considerations;
- development projections;
- DCC program costs;
- timing of proposed capital projects;
- addition of new projects to the DCC program, where necessary; and,
- deletion from the DCC program of those capital projects that have been completed or are no longer required.

It is anticipated that a major DCC bylaw amendment is not required more often than once every five years, unless conditions which form the basis for the bylaw change. As DCCs are strongly linked to the OCP, a suitable opportunity for a full review of DCCs would be immediately following an OCP review. In fact, there is merit in building into a municipality's strategic planning process, a framework for sequential review of the OCP, the capital planning process, and the DCC bylaw. Two events which may trigger the need for a major review are:

- when a major change in DCC assumptions has occurred; and,
- when DCC revenues/expenditures deviate from projections by a certain established percentage.

Recommended Best Practice

Major amendments to the DCC bylaws should be completed at least once every five years involving a full review of DCC issues and methodology.

In a municipality where an ongoing public process has been established for addressing DCC issues, such as a DCC Advisory Forum, this group would provide valuable assistance in completing a comprehensive review.

Part 2:

Technical Manual

4. ESTIMATING NEW DEVELOPMENT

DCCs are generally determined by dividing the net cost of capital expenditures attributable to new development over a certain time period, by the corresponding number of projected development units or area that will be developed in that same time period. Therefore, one of the key calculations in establishing DCCs is the estimation of new development. This chapter describes prerequisite policy decisions required and the information needed prior to the projection of new development units. Procedures are presented for estimation of residential and non-residential development. Where possible, alternative methods of calculation are presented, and a recommended best practice is suggested.

Prerequisite Policy Decisions

The calculation of new development units will depend on how the policy issues described in Part I - Guidebook of this Best Practices Guide have been considered. Before calculations can proceed, the following questions must first be answered satisfactorily.

- How extensively will DCCs be applied, on a municipal-wide basis or area-specific basis?
- What time frame will be established for the DCC program (i.e., on a revolving or buildout basis)?
- What categories of development will be charged (e.g., residential, non-residential)?
- How detailed will land uses be broken down (e.g., the range of residential and/or non-residential land uses)?
- What units will be used to calculate DCCs (e.g., lots, dwelling, units, floorspace)?

Sources of Background Information

Sources of data and background documents which provide information to determine development projections include:

- Official Community Plans (OCP);
- Zoning Bylaws;
- BC Stats;
- BC Assessment Authority (BCAA);
- Census information;
- Local Health Area data;
- information contained in Tax Rolls;
- Building Permit statistical information;
- municipal development statistics; and,
- Economic Development Reports or Retail Market Studies.

The background documents can yield information on demographic assumptions, projected number of residential units according to a certain housing stock mix, projections for non-residential development in terms of area absorbed per year, and areas designated for specific types of land use.

New Development Projections

Having made the prerequisite policy decisions and located the available background information, new development projections can be made for residential and non-residential land uses. As a minimum, residential should include single family and multi-family, while non-residential should include commercial, industrial, and institutional.

The following sections present various methods of calculation to project new development. The approaches could also be adopted for a more detailed breakdown of land uses than what is shown. For example, development categories could include duplex or mobile home pads for residential, service commercial or office commercial, light industrial/warehousing or heavy industrial/manufacturing, and schools for non-residential.

Projected Residential Development

In the following example calculations, the prerequisite policy decisions have been presumed:

- municipal-wide application of DCCs;
- a revolving ten year time frame; and,
- residential DCCs according to dwelling units.

It is noted that the calculations could be adjusted for an area-specific DCC, a buildout time frame, and/or residential DCCs according to floorspace.

Further, residential land uses are expressed as a density gradient in the following ranges, as opposed to building forms (see Chapter 2 for fuller discussion of this recommended best practice). The density gradient below differs from that suggested in Chapter 2:

- less than 15 D.U. (dwelling units) per hectare (instead of single family);
- 15 up to 44 D.U. per hectare (instead of townhouse);
- 44 up to 74 D.U. per hectare (instead of low rise apartment); and,
- 74 or greater D.U. per hectare (instead of high rise apartment).

Of course, each municipality would determine the number of, and limits between, density categories appropriate to their community, and the above ranges are shown only to provide some basis for the following examples.

Two approaches to residential development projections are presented: the first involves modification of the population projection, while the latter does not directly consider population figures.

Modified population growth method
Where population is considered a proxy for the need for infrastructure improvements, this method seeks to determine how much population growth is a result of new development units, as provided by the OCP.

It is noted that "new development" is often incorrectly referred to as "growth." However, growth in population may not always result in additional residential units, and there are subtle distinctions between the two terms. Growth can occur in existing development due to:

- replacement housing (represented by building permits less than four dwelling units and/or less than $50,000 in value);
- occupancy of unaccounted "in-law" suites; and,
- occupancy of illegal secondary suites.

It has been argued that natural increase (i.e., births minus deaths) does not result in new developments either, but presumably the rate of natural increase is the same in existing dwellings as new housing units.

The portion of population increase that may not translate into new residential development could possibly be quite sizeable, depending on a municipality's circumstances. The significance of this factor could be determined by comparing building permit records and occupancy rates to population figures. Even if there is insufficient information to accurately determine the impact, this phenomenon should be acknowledged. Therefore, the "modified population growth" method for projecting residential development includes an allowance for the component of the total population growth that does not result in new development projections. This percentage is referred to, as "F" in Example 4.1 on page 42.

The following information is required from the background planning documents to project the amount of residential development units:

- the anticipated annual population growth rate;
- the housing stock composition; and,
- occupancy rates at different dwelling unit densities.

Based upon an anticipated annual growth rate, a population projection can be made for a specified time period (ten years, as shown in the example). The anticipated growth rate(s), is (are) commonly stated in the OCP. For the purposes of DCC calculations, a conservative projection of the population is desired. The impact of overestimating growth is that revenues will be overstated in comparison to the amounts actually received, and sufficient funds will not be realized to implement necessary projects. The challenge in making development projections in the case of a buildout program is how best to account for the fact that many areas do not develop to the full density permitted by the OCP or Zoning Bylaw.

Dwelling and household characteristics are often found in the OCP, Census data, or municipal development statistics. As occupancy rates may be sensitive to the actual neighbourhood, the use of local data should be employed in calculating DCCs. For illustrative purposes only, typical ranges of housing stock proportion are shown in Table 4.1, and typical ranges of occupancy rates are shown in Table 4.2 on the following page.

Table 4.1
Typical Ranges of Housing Stock Composition

Density Gradient	Proportion of Total Housing Stock
< 15 D.U./ha (similar to Single Family)	60% - 75%
15 up to 44 D.U./ha (similar to Townhouse)	10% - 30%
44 up to 74 D.U./ha (similar to Low Rise Apartment)	10% - 15%
74 and greater D.U/ha (similar to High Rise Apartment)	0% – 5%

Table 4.2
Typical Ranges of Occupancy Rates

Density Gradient	Occupancy Rate
x < 15 D.U./ha (similar to Single Family)	3.2 – 3.5 persons per unit (ppdu)
15 < x < 44 D.U./ha (similar to Townhouse)	2.4 – 2.8 ppdu
44 < x < 74 D.U./ha (similar to Low Rise Apartment)	1.7 – 2.0 ppdu
74 < x D.U./ha (similar to High Rise Apartment)	1.4 – 1.7 ppdu

Thus the projected residential development units for four gross density ranges can be estimated as shown in Example 4.1.

Example 4.1
Projected Residential Development Units
Modified Population Growth Method

Year	Population
0	76,550
1	77,469
2	78,398
3	79,339
4	80,291
5	81,255
6	82,230
7	83,216
8	84,215
9	85,226
10	86,248
P=	9,698 persons

$P_{effective}$ = P x (1 - F)
= 9,698 x (1 - 0.05)
= 9,213 persons
U_{15} = 0.6U
U_{44} = 0.25U
U_{74} = 0.1U
U_{74+} = 0.05U

$P_{effective}$ = $(R_{15} \times U_{15}) + (R_{44} \times U_{44}) +$
$(R_{74} \times U_{74}) + (R_{74+} \times U_{74+})$
= (3.2 x 0.6U) + (2.5 x 0.25U) +
(1.7 x 0.1U) + (1.4 x 0.05U)
2.785U
9,213 = 2.785U
U = 3,308 units

Therefore:

# of units, x < 15 D.U/ha = 1,985
# of units, 15 < x < 44 D.U./ha = 827
# of units, 44 < x < 74 D.U./ha = 331
# of units, 74 < x D.U/ha = 165

Given:
Ten Year Population Increase = P
% Growth Not Part of Development = F

Effective Population = $P_{effective}$
Total Residential Units = U
# of units, x < 15 D.U./ha = U_{15}
# of units, 15 < x < 44 D.U./ha = U_{44}
# of units, 44 < x < 74 D.U./ha = U_{74}
# of units, 74 < x D.U./ha = U_{74+}
Occupancy Rate for U_{15} = R_{15}
Occupancy Rate for U_{44} = R_{44}
Occupancy Rate for U_{74} = R_{74}
Occupancy Rate for U_{74+} = R_{74+}
Assumptions:
Time Period (yrs) = 10
Annual Growth Rate (%) = 1.2
Base Year Population = 76,550
F = 5%

Proportion of U_{15} = 60%
Proportion of U_{44} = 25%
Proportion of U_{74} = 10%
Proportion of U_{74+} = 5%

R_{15} (ppdu) = 3.2

R_{44} (ppdu) = 2.5

R_{74} (ppdu) = 1.7

R_{74+} (ppdu) = 1.4

Development potential method
This method projects the amount of residential development on the basis of development potential. As a result, no direct link is made to a growth rate, and population is only implicitly considered in this approach.

This method is particularly suited to local governments where new development almost exclusively occurs in "greenfield" sites. In other words, this approach is difficult to apply in local governments experiencing significant redevelopment. For the each of the gross density ranges being considered as a residential charge category, the total number of dwelling units can be determined from the Zoning Bylaw, given the total area for the respective density ranges, as designated in the OCP. Assuming that the OCP is to be achieved over some period of time greater than the DCC time period, the number of units can be prorated for the purposes of DCC calculations, as shown in Example 4.2.

Example 4.2
Projected Residential Development Units
Development Potential Method

Units = Area x Avg. gross density x (Time Period/OCP Buildout)

Therefore,

U_{15} = A_{15} x 10 x (10/25) = 496 x 10 x (10/25) = 1,984

U_{44} = A_{44} x 30 x (10/25) = 69 x 30 x (10/25) = 828

U_{74} = A_{74} x 60 x (10/25) = 14 x 60 x (10/25) = 336

U_{74+} = A_{74+} x 75 x (10/25) = 5.5 x 75 x (10/25) = 165

Summary:
# of units, $x < 15$ D.U./ha = 1,984
# of units, $15 < x < 44$ D.U./ha = 828
# of units, $44 < x < 74$ D.U./ha = 336
# of units, $74 < x$ D.U./ha = 165

Given:
# of units, $x < 15$ D.U./ha = U_{15}
# of units, $15 < x < 44$ D.U./ha = U_{44}
# of units, $44 < x < 74$ D.U./ha = U_{74}
# of units, $74 < x$ D.U./ha = U_{74+}

Area in OCP/Zoning Bylaw designated < 15 D.U./ha = A_{15}

Area in OCP/Zoning Bylaw designated $15 < x < 44$ D.U./ha = A_{44}

Area in OCP/Zoning Bylaw designated $44 < x < 74$ D.U./ha = A_{74}

Area in OCP/Zoning Bylaw designated $74 < x$ D.U./ha = A_{74+}

Assumptions:
Avg. gross density of A_{15} = 10 D.U./ha
Avg. gross density of A_{44} = 30 D.U./ha
Avg. gross density of A_{74} = 60 D.U./ha
Avg. gross density of A_{74+} = 75 D.U./ha
A_{15} = 496ha
A_{44} = 69ha
A_{74} = 14ha
A_{74+}= 5.5ha
Time Period (years) = 10
OCP Buildout (years) = 25

Projected Commercial and Industrial Development

In the following example, calculations for commercial and industrial development, the prerequisite policy decisions have been presumed:

- municipal-wide application of DCCs;
- a revolving ten year time frame;
- commercial DCCs according to floorspace; and,
- industrial DCCs according to gross site area.

It is noted that the calculations could be adjusted for an area-specific DCC, a buildout time frame, and/or DCCs according to other area-based measures.

Two approaches to commercial and industrial development projections are presented: the first involves linkage to population growth, while the latter considers only development potential.

Population growth method

This approach assumes a correlation between the need for commercial/industrial floorspace and population growth. This method uses the historical rate of commercial and industrial development as the basis for projection into the future. This approach is appropriate for isolated local governments where most commercial and industrial activity exists to service the community's population, given that the municipality has enough appropriately designated lands to accommodate future growth needs. Past floorspace figures can be obtained from building permit records. For the corresponding population, a per capita floorspace can be calculated, and this figure can be multiplied by the DCC time period to obtain a projection of the estimated gross floor area.

For example, suppose a review of building permit records revealed total annual commercial floorspace developed, as shown in Table 4.3. The historical floorspace per capita can be calculated by dividing the total area by the corresponding population for those years (perhaps from Census data) which is also shown in Table 4.3.

Table 4.3
Historical Commercial Per Capita Floorspace Example

Year	Total Floorspace (m^2)	Corresponding Population	Floorspace per Capita (m^2/capita)
1991	374,145	71,678	5.2
1995	416,562	76,550	5.4

Given the historical trend, it might be assumed that the per capita floor area for the DCC program would be an average of the figures, and the projected floor area over the DCC time period can be estimated. This calculation is shown in Example 4.3.

Example 4.3
Commercial Floorspace Projection
Population Growth Method

Use an average of the previous per capita gross floorspace figures as a basis for next ten year period.

$$R = (5.2 + 5.4)/2$$
$$= 5.3\text{m}^2\text{/capita}$$

$$C = P \times R$$
$$= 9{,}698 \times 5.3$$
$$= 51{,}399\text{m}^2 \text{ floorspace}$$

Given:
Ten Year time Period for DCC Program

Ten Year Population Increase = P
Commercial Floorspace per Capita = R
Ten Year Commercial Floorspace = C

Assumptions:
1991 Gross Floorspace per Capita = 5.2 m^2/capita

1995 Gross Floorspace per Capita = 5.4 m^2/capita

Projected Ten Year Population Increase = 9,698 persons

Example 4.4
Industrial Site Area Projection
Population Growth Method

$$\begin{aligned} I &= P \times R \\ &= 9{,}693 \times 11.9 \\ &= 115{,}406 \text{ m}^2 \text{ floorspace} \end{aligned}$$

I (ha gross I (m^2 floorspace)/Site Coverage site area) = (115,406/0.50)/10,000
= 23.08 ha

Given:
Ten Year time Period for DCC Program
Ten Year Population Increase = P
Industrial Floorspace per Capita = R
Ten Year Industrial Projection = I

Assumptions: Industrial Gross Floor Area per Capita = 11.9 m^2/capita
Projected Ten Year Population Increase = 9,698 persons
Average Site Coverage = 50%

The same approach could be adopted for industrial development. If in this case, the DCC is based on gross site area, an average site coverage in percent can be assumed to convert building area, in square metres to gross site area, in hectares (Example 4.4).

Development potential method
Some have argued that projecting commercial/industrial floorspace in relation to population growth is incomplete. In particular for urban regions, the demand for commercial and industrial developments may also be generated by customers from a neighbouring municipality, such as in the case of "big box" retailers.

The development potential method seeks to project the need for these types of land uses solely on the basis of development potential, without any linkage to a growth rate. Often this information exists in economic development reports or retail market needs assessment studies.

If these studies are unavailable, the total potential floorspace can be calculated for each of the commercial/industrial DCC categories by multiplying the floorspace ratios found in the Zoning Bylaw by the total areas designated for these land uses in the OCP. After deducting the amount built to date (as found in building permit records) from the total potential, the remaining floorspace results. Assuming that the remaining amount is to be achieved over the time period of the OCP, some proration can be made to determine the commercial and industrial projections for the purposes of DCC calculation. The adjustment may be made based on knowledge of local circumstances and good judgement.

In local governments where commercial/industrial development occurs predominantly in "greenfield" sites, the development potential can be obtained by simply totalling the amount of vacant commercial and industrial lands (Example 4.5).

Example 4.5
Commercial and Industrial Projections
Development Potential Method

$$\begin{aligned} C &= A_c \times (\text{Time Period/OCP Buildout}) \times \text{FSR} \\ &= 18.35 \times (10/25) \times 0.7 \\ &= 5.138 \text{ ha} \\ &= 51{,}380 \text{ m}^2 \text{ floorspace} \end{aligned}$$

$$\begin{aligned} I &= A_I \times (\text{Time Period/OCP Buildout}) \\ &= 57.7 \times (10/25) \\ &= 23.08 \text{ ha} \end{aligned}$$

Given:
Total Vacant Commercial Land = Ac
Total Vacant Industrial Land = A_I
Ten Year Commercial Floorspace = C
Ten Year Industrial Projection = I
Assumptions:
Commercial FSR = 0.7
A_c = 18.35 ha
A_I = 57.7 ha
Time Period (years) = 10
OCP Buildout (years) = 25

Projected Institutional Development
Establishment of institutional DCCs is difficult, for the reasons discussed in Chapter 2. Compounding the difficulty is the lack of predictability to institutional floorspace projections (e.g., private and public schools, hospitals, municipal buildings). Unlike commercial and industrial land uses which are based on the economic health of a community, institutional development is typically subject to various levels of government fiscal policy and tends to involve one or two large projects spread out over several years.

If DCCs are to be established for this land use, the best method of estimating institutional floorspace is to obtain the capital plans from major institutional developers. For example, the School and Health Boards may outline new facilities and additions in their capital project plans.

Alternatively, the two methods offered for the calculation of commercial/industrial floorspace can also be used to project institutional needs with some modifications. For the population growth method, a longer survey of building permit records is desirable, such as 20 or 25 years so that the effects of large, individual projects are averaged over the long term. For example, once a college has been built, another such facility might not be constructed for many years. The development potential approach could be used, if combined with good judgement and knowledge of local circumstances. The buildout of institutional floorspace would not likely be prorated in a linear fashion.

5. COMPILING A DCC PROGRAM

To calculate DCCs, the proposed capital infrastructure program required to support new development must be identified. This chapter describes prerequisite policy decisions required and the sources of information needed to develop a DCC program. Some guidelines are suggested for estimating capital costs, and a format for presenting the summary DCC information is provided.

Prerequisite Policy Decisions

The development of a DCC program will depend in part, on how the policy issues described in Part I - Guidebook of this Best Practices Guide have been considered. Before a DCC program can be compiled, the following questions must be answered satisfactorily.

1. How extensive will DCCs be applied, on a municipal-wide basis or area-specific basis?
2. What time frame has been established for the DCC program (i.e. on a revolving or build-out basis)?
3. What type of projects can be included in a DCC program?
4. What project costs are DCC recoverable?

Sources of Background Information

Sources of data and background documents which provide information to compile a DCC program include:

- Official Community Plan (OCP);
- Financial Plan;
- Capital Expenditure Program (CEP);
- Master Transportation Plan;
- Master Drainage Plan (or Stormwater Management Plan);
- Master Sewerage Plan (or equivalent);
- Water Distribution Modeling Reports; and,
- Parks Master Plan.

On the basis of technical information contained in background reports together with suitable resolution of policy considerations, a DCC program can then be prepared.

Estimation of Capital Costs

As a DCC program is actually a subset of the financial plan or CEP as applicable, the purpose of this guide is not to describe how capital expenditures should be estimated. However, since the calculation of DCCs is directly tied to the costs of capital projects, some suggestions and guidelines are offered below regarding capital costs.

It is important that capital costs be properly estimated. As mentioned previously, DCCs are generally determined by dividing the net cost of capital expenditures attributable to new development by the amount and types of various land uses expressed in common "development units." The *Local Government Act* stipulates that the resulting charges cannot be excessive in relation to the capital cost of prevailing standards of service (section 934 (4) (d) (i)). On the other hand, if capital costs are underestimated, the resulting charge will be understated. If collected funds are insufficient to cover the costs of required infrastructure construction, development may be delayed as a consequence. Therefore, cost estimates should be as accurate as possible to ensure that sufficient funds are collected to meet project costs, yet the estimates should not be excessive relative to actual costs.

The level of detail to which cost estimates should be completed will depend on the level of technical information that exists at the time of preparing the DCC bylaw. Often, only a planning level of engineering analyses is available, especially when projects are projected many years into the future. As the time of construction becomes closer, the cost estimates should be refined to reflect the progress made in the design process. Those familiar with Ministry of Transportation and Highways (MOTH) policies will be aware of the five classes of cost estimates used by that Ministry, as described below.

1. Class E:
    - accuracy level 20% to 25%;
    - used to establish global budgets for feasibility and cost analyses;
    - based on various planning studies to identify needs, corridors, routes, etc.; and,
    - estimates made using average road costs per kilometre, lump sums for structures, etc.

2. Class D:
    - accuracy level 15% to 20%;
    - used to establish a preliminary cost estimate in an elemental format for cost planning purposes, for determining costs by engineering discipline for preliminary fee purposes and to establish a preliminary project control budget;
    - based on selected routes resulting from detailed route studies; and,
    - estimates made using average unit costs for summary level activities.

3. Class C:
    - accuracy level 15%;
    - used to confirm the control budget costs and to formulate tender packages;
    - based on preliminary design drawings and outline specifications; and,
    - estimates made using average unit costs for detailed activities.

4. Class B:
    - accuracy level 10%;
    - used to review and confirm the construction contract package costs;
    - based on completed functional design documentation; and,
    - estimates made using site-specific unit costs for detailed activity levels.

5. Class A:
    - accuracy level 7.5%;
    - used to produce final cost estimates for construction tenders;
    - based on Engineer's final quantity estimates; and,
    - estimates made using site and market specific unit costs for contract pay items.

These classes of cost estimates could be adapted for use in estimating the capital costs of the DCC projects. For items planned for construction in a revolving window of five or ten years, cost estimates should be completed to a Class B or C level of accuracy, if possible. Longer term items in a build out program, cost estimates should be to a Class D or E level, as a minimum.

Given the *Local Government Act* definition of capital costs (section 932 (4)), the various costs of project components related to planning, engineering, and legal aspects need to be estimated, including:

- municipal administration costs;
- municipal overhead charges;
- engineering design services;
- engineering services during construction;
- materials testing allowance;
- allowance for underground hydro and telephone and/or for environmental mitigation; and,
- contingencies.

Right-of-way acquisition is another component of the capital cost that is recoverable through DCCs, and typical land costs can be obtained from local real estate agents, the BC Assessment Authority, or even independent land appraisers, if necessary. With respect to arterial roads, a right-of-way to a local standard might have been dedicated at time of subdivision. If no further subdivision along the frontage is anticipated, the additional right-of-way involved with upgrading to an arterial standard might have to be purchased by the municipality, and these costs should be included. In other cases, it can be assumed that the widening would be dedicated through the subdivision process without cost implications. For storm and sanitary sewer and watermains, these utilities are usually constructed within the road allowance. However, for sewers and mains constructed outside the road allowance, right-of-way acquisition costs should be included as a capital cost for DCC calculation.

Presentation of a DCC Program

To facilitate the calculation of DCCs during bylaw development, as well as monitoring and tracking of projects once the bylaw is in place, the DCC program should be compiled in a summary table. This table includes assigning a Project Reference Number to each capital project in the DCC program. For each capital project, a "Detail Sheet" should be appended to the supporting DCC documentation according to the Project Reference Number. The Detail Sheet is a standard form which itemizes all components of the cost estimate such as construction elements as well as planning, engineering, contingencies, etc. Example 5.1 presents a suggested format for presenting the summary information for the DCC program, while Example 5.2 shows an example of a typical Detail Sheet.

Example 5.1
Suggested Format for DCC Program

Road DCC Program

Project No.	Location			Description	Cost Estimate	Year	Comment
	On	From	To				
R001	16 Ave.	Ironwood St.	Shoppers Row	Road reconstruction	$800,000	1998	Incl. R/W, 14m, C&G S/W
R002	83 Ave	212 St.	216 St.	Arterial Widening	$1,129,000	1998	Incl. Signals
R003	88 Ave.	202 St.		Signal	$97,000	1998	
R004	200 St.	26 Ave.		Bridge	$750,000	1999	As per traffic study
R005	Ospika Blvd.	Tyner Rd.	Hwy. 16	Arterial	$1,650,000	1999	Full arterial road
R006	S. Alder St.	Robron Rd.	Hilchey Rd.	Arterial	$8,559,000	1999	Full arterial road
R007	16 Ave.	248 St.	256 St.	Recap + Shoulders	$217,000	2000	
R008	16 Ave.	200 St.	208 St.	Major Collector	$2,632,000	2001+	Full urban standard
R009	30A Ave.	260 St.	264 St.	Top Lift	$53,000	2000	
R010	Austin Rd.	Poirier St.		Left Turn Bay	$280,000	1997	As per traffic study
R011	Clarke Rd.	Como Lake Rd.		Intersection Improve.	$800,000	1997	As per traffic study
R012	Mariner Way	Como Lake Rd.	Austin Rd.	Arterial Widening	$800,000	1997	Widening only
R013	1 St.	Arden Rd.	Willemar Ave.	Major Collector	$588,000	1997	Widening only
R014	10 St.	Willemar Ave.	McPhee Ave.	Top Lift	$192,000	2000	Incl. S/W
R015	Mission Rd.	Muir Rd.	Lerwick Rd.	Major Collector	$750,000	2000	Incl. R/W
R016	32 Ave.	256 St.	29 Ave.	ROW	$300,000	2001	R/W acquisition only
R017	88 Ave.	206 St.	207 St.	Median	$60,000	2001+	Incl. Landscaping
R018	62 Ave.	203 St.	204 St.	Half Road	$182,000	2001+	Incl. Road drains
			Total Road DDC Program		**$19,839,000**		

Example 5.2
Suggested Format for Detail Sheet

16 Avenue **Project:** R001

From: Ironwood St. **To:** Shoppers Row

Description: Reconstruct existing road to full 14m standard c/w curb & gutter and sidewalks both sides.

Length: 750m

Notes:
- will require some ROW acquisition
- will require utility pole relocation
- does not include watermain

No.	Item	Quantity	Unit	Unit Price	Total
1	ROW acquisition	1	LS	$20,000	$20,000
2	Common excavation & disp. (0.30m)	4,450	m^3	$6	$26,700
3	Pit run gravel (0.30m)	4,450	m^3	$16	$71,200
4	20mm gravel (0.13m)	1,480	m^3	$32	$47,360
5	300 mm dia. storm sewer	210	m	$118	$24,780
6	1,050 mm dia. storm manholes	2	ea	$1,800	$3,600
7	Curb & gutter	1,500	m	$54	$81,000
8	Sidewalk (1.8m)	2,420	m	$40	$96,800
9	Asphalt (0.075m)	2,150	m^3	$56	$120,400
10	Boulevard restoration	1,500	m	$23	$34,500
11	Street lighting	22	ea	$3,500	$77,000
12	Relocate utility poles	3	ea	$2,000	$6,000
13	Signs and markings	750	ea	$5	$3,750
	Subtotal				**$613,090**
14	Engineering design				$42,916
15	Engineering field services				$30,655
16	Materials testing allowance				$3,065
17	City staff costs				$12,262
18	City overhead				$24,524
19	Hydro, tel, & envir. Allowance				$12,262
20	Contingencies				$61,309
	Total				**$800,082**

6. DETERMINING THE NET DCC RECOVERABLE AMOUNT

Once the projection of new development has been estimated, and a program of infrastructure projects required to support that new development has been compiled into a DCC program, the net amount to be paid by DCCs must be determined. The net DCC recoverable amount should not be confused with DCC recoverable cost components. While the latter pertains to the various aspects of a capital project that can be included as a capital cost for the purpose of DCC calculations (e.g., construction, planning, engineering, legal, etc.), the former is the net figure that is divided by the amount of new development to obtain the DCC rate. This chapter describes a number of considerations that should be taken into account to arrive at the net DCC recoverable amount: deducting grants and other funding sources, allocating the benefit to new development, applying the municipal assist factor, and deducting any existing DCC reserve monies.

Deducting Grants and Other Funding Sources

The DCC recoverable portion of capital expenditures should be net costs attributable to new development. In other words, if funding contributions from other sources are associated with a capital project, these monies should be taken into account.

Some transportation projects may be financed partly through grants under the *Highways Act*, the provincial Local Government Grant Program, and federal Infrastructure Programs. In the case of newly incorporated municipalities, Ministry of Municipal Affairs may offer funding assistance for certain projects. Other funding sources may include agencies such as B.C. Transit, a Developer contribution over and above DCCs, or Local Improvement Program.

Although it has been increasingly difficult to obtain, sewer and waterworks do qualify for higher level government financial aid under the *Local Government Grants Act*. Assistance ranges from 25% to 50%; however, provincial funding for growth related works has a lower priority than environmental or pollution clean up projects. It is noted that drainage works do not qualify for assistance under this program.

It is advised that the appropriate legislation be checked for recent changes in policy. In the current climate of fiscal restraint, contributions from higher government cannot be assured, even if projects qualify. Thus, a cautious and conservative approach with respect to grants would be to assume that none would be forthcoming. If a grant is subsequently awarded, the DCC bylaw should be amended accordingly.

Allocating Benefit

Similar to the issue of the municipal assist factor, no direct reference is provided in the *Local Government Act* which formally recognizes apportionment of benefit. Section 933 (2) states only that DCCs imposed by a local government for the construction of infrastructure must service new development either directly or indirectly. However, the guiding principle of fairness and equitable distribution of capital costs amongst those parties receiving benefit, suggests that certain DCC projects may benefit the population at large. For example, existing users may receive some benefit from the construction of infrastructure, if the facilities are upgraded in response to pent up demand as well as new development. In this case, the capital costs (or some portion of them) should be shared by the entire community. Thus the allocation of capital costs that benefit existing users (versus capital costs attributable to new development) should be deducted from the difference between the total capital cost estimate and funds from other sources.

Benefit apportionment should also reflect the fact that not all growth translates to new development units. As discussed in Chapter 4, growth can be can be accommodated in building permits for dwelling units of four or less (thus exempt from paying DCCs), and this component does not result in additional development units for the purpose of DCC calculation. Just as this effect is taken to account when making new development projections, it should also be incorporated into the consideration of benefit allocation.

Roads
It is acknowledged that a good transportation network is beneficial to the entire community. In response, capital costs related to the road DCC program should be apportioned to existing users as well as to new development. Some apportionment is especially appropriate when a municipal-wide approach has been adopted in the calculation of road DCCs.

Generally, those aspects of the road DCC program which involve replacing existing components, such as road rehabilitation projects have a higher benefit to existing users than capital projects that provide increased capacity, such as new roads, additional lanes, new traffic control devices, and left turn bays. The existing and improved Levels of Service (LOS) should be considered. While it can be argued that new development does not cause all the new traffic demands (existing users may be travelling more), there is a link between new development and the need for additional road facilities.

Storm Drainage, Sanitary, and Water
For storm drainage, sanitary, and water, new infrastructure systems or extensions into previously unserviced areas clearly have little benefit to existing users. However, for infrastructure components that are well integrated into existing systems, such as an interconnected watermain, allocating benefit may be more difficult. If existing residents are adequately served by existing utilities, existing users may receive benefit in the form of improved service and should share in the capital costs.

Suggestions for Apportionment
It is acknowledged that the allocation of benefit may be difficult to quantify, especially if projects are being proposed for construction in ten or twenty years. Although an element of subjectivity will always exist, the rationale for apportionment of capital costs in the DCC bylaw should include supporting documentation, technically based where possible.

Two approaches to allocating benefit are suggested below: a general "rule of thumb" approach, and a method based on some technical means. Either approach could be applied on a project by project basis or on the total value of the DCC program, depending on the types and nature of the capital improvements.

One way is to use the following "rule of thumb." If construction of the proposed works would not proceed at all if there was no new development, then it would be fair to say that 0% should be paid by existing users. In other words, 100% of the costs would be attributable to new development and eligible for DCC recovery. In some cases, the marginal costs associated with "oversizing" may be assessed in this manner.

If it is evident that the existing public gains at least some benefit from new capital works and infrastructure improvements and that some benefit will be received by a component of growth that will not be reflected in new development units (and thus will not be subject to DCCs), then equitable assessment of that benefit is dependent upon selection of a suitable means for apportionment. For example, in the case of an arterial road, the capital costs could be apportioned according to traffic capacity, while for trunk sewers, costs could be split according to flow. Service population could also be a way of allocating benefit. If only a planning level of engineering analyses is available at the time of bylaw development, general ranges of benefit could be assigned based on technical data accompanied by good engineering judgement.

The following examples show the various means to apportion benefit and illustrate the subjectivity involved in justifying that apportionment.

Example 6.1
Allocating Benefit – Case 1A

Using the "rule of thumb" rationale, project would not proceed if it was not for new development needs.
Therefore, benefits to new development = 100%

Given:
Bridge project

Assumptions:
- two lanes presently offer LOS "B"
- proposed to be upgraded to four lanes to access greenfield site.

Example 6.2
Allocating Benefit – Case 1B

Benefit can be apportioned according to the following rationale. The argument is that the bridge needs to be replaced anyway.

2 lanes existing = 50% benefit to existing users
4 lanes ultimate
Therefore, benefit to new development
= (100% - 50%) = 50%

Given:
Bridge project

Assumptions:
- two lanes presently offer LOS "B"
- bridge currently at end of service life
- proposed to be upgraded to four lanes to access greenfield site.

Example 6.3
Allocating Benefit – Case 1C

Bridge is inadequate to service present needs. Upgrade to four lanes will improve LOS as well as accommodate new development.
Rationale for apportionment as follows:
3 lanes needed to adequately service existing
1 lane to accommodate new development

Therefore, benefits to new development = 25%

Given:
Bridge project

Assumptions:
- two lanes presently offer LOS "D"
- bridge currently at end of service life
- new development expected to add 1/3 more traffic.

Example 6.4
Allocating Benefit – Case 2

$\frac{\text{700 vehicles}}{\text{2,000 vehicles}}$ = 35% benefit to existing users

Therefore, benefits to new development =
(100% - 35%) = 65%

Given:
Arterial Road Construction

Assumptions:
Total Estimated Current Peak Hour Traffic
= 700 vehicles (e/w)
Total Estimated Peak Hour Capacity of Future Road System = 2,000 vehicles (e/w)

Example 6.5
Allocating Benefit – Case 3A

Using "rule of thumb" rationale, project would not proceed if it was not for new development needs.
Therefore, benefit to new development = 100% and full cost for 300mm dia. sewer project are DCC recoverable.

Given:
Sanitary Sewer Project

Assumptions:
- 250mm dia. pipe presently 50% full
- 300mm dia. pipe required for new development

Example 6.6
Allocating Benefit – Case 3B

Allocating benefit according to the following rationale. The argument is that the sewer needs to be replaced anyway. Only apportion marginal cost between installation of 250mm dia. and 300mm dia. pipe to new development.

Therefore, benefits to new development =
$10,000/$60,000 = 17%

Given:
Sanitary Sewer Project

Assumptions:
- 250mm dia. pipe presently leaking
- Replace with 300mm dia. pipe required for new development
- 250mm dia. pipe replacement to cost $50,000
- 300mm dia. pipe replacement to cost $60,000

Example 6.7
Allocating Benefit – Case 4

Total Service Population = 76,550 + 9,698 persons = 86,248 persons.

Therefore, benefit to new development = 9,213/86,248 = 11.7%

Given:
Water Treatment Facility Upgrade and Expansion

Assumptions:
Base Year Population = 76,500 persons
Ten Year Population Increase = 9,698 persons
Ten Year Effective Population Increase = 9,213 persons

Applying the Municipal Assist Factor

The municipal assist factor is another deduction which should be made in determining the net DCC recoverable amount. As discussed in Chapter 2, this factor is separate from any allocation of capital costs based on benefit.

Remember that different infrastructure categories could have different municipal assist factors. For example, a road DCC could have an assist factor of 10%, while for sanitary DCCs, the assist factor could be 5%. However, all land uses within a particular category must have the same assist factor applied. For example, a 10% assist for residential and a 25% assist for commercial developments could not be provided.

The municipal assist factor should be applied to the portion of costs apportioned to new development. In other words, from the total capital costs, applicable funds from other sources should first be deducted. From the resulting amount, the benefit factor should be applied. Then, the assist factor should be calculated on the remaining amount.

Calculating the Net Recoverable Cost of the DCC Program

The net recoverable cost of the DCC program is determined by allowing for the following considerations:

- identification of government grants and other funding contributions;
- determination of the portion of costs applicable to new development; and,
- application of the municipal assist factor.

Compilation of the DCC recoverable amount for each project produces the net recoverable cost of the DCC program. Example 6.8 on page 55 shows a suggested format for summarizing these various financial components of the DCC program. The columns identified in the table are explained as follows.

Column	Explanation
(1)	Total Capital Cost Estimate
(2)	Grants and Funds from Other Sources
(3)	Benefit Factor for New Development
(4)	Benefit to New Development: [(1)-(2)] x (3)
(5)	Municipal Assist Factor Amount: (4) x Assist %
(6)	DCC Recoverable Amount: (4) - (5)
(7)	Total Municipal Responsibility: [(1) - (4)] + (5)

Deducting Existing DCC Reserves

If the proposed bylaw is an update of an existing DCC bylaw, some capital projects may be carried over to the updated DCC program, if they were not previously constructed. In this case, any monies in the existing DCC reserve account not yet expended should likewise be carried over into the new bylaw. Therefore, these funds should be applied to offset the net DCC program recoverable amount.

Calculating the Net DCC Recoverable Amount

The net DCC recoverable amount is obtained by deducting any existing DCC reserve monies from the net recoverable cost of the DCC program.

Example 6.8
Suggested Format for Recoverable DCC Program Costs

Road DCC Program Recoverable Costs

	Column			(1)	(2)	(2)	(4)	(5)	(6)	(7)
Project No.	Location			Cost Estimate	Other Funding Sources	Benefit Factor (%)	Benefit to New Dev.	Municipal Assist Factor (1%)	DCC Recoverable	Total Municipal Responsibility
	On	From	To							
R001	16 Ave.	Ironwood St.	Shoppers Row	$800,000		65	$520,000	$5,200	$514,800	$285,200
R002	88 Ave.	212 St.	216 St.	$1,129,000		100	$1,129,000	$11,290	$1,117,710	$11,290
R003	88 Ave.	202 St.		$97,000		65	$63,050	$631	$62,419	$34,581
R004	200 St.	26 Ave.		$750,000		50	$375,000	$3,750	$371,250	$378,750
R005	Ospika Blvd.	Tyner Rd.	Hwy. 16	$1,650,000		65	$1,072,500	$10,725	$1,061,775	$588,225
R006	S. Alder St.	Robron Rd.	Hilchey Rd.	$8,559,000	$4,279,500	100	$4,279,500	$42,795	$4,236,705	$42,795
R007	16 Ave.	248 St.	256 St.	$217,000		65	$141,050	$1,411	$139,639	$77,361
R008	16 Ave.	200 St.	208 St.	$2,632,000		100	$2,632,000	$26,320	$2,605,680	$26,320
R009	30A Ave.	260 St.	264 St.	$53,000		65	$34,450	$345	$34,105	$18,895
R010	Austin Rd.	Poirier St.		$280,000		65	$182,000	$1,820	$180,180	$99,820
R011	Clarke Rd.	Como Lake Rd.		$800,000		65	$520,000	$5,200	$514,800	$285,200
R012	Mariner Way	Como Lake Rd.	Austin Rd.	$800,000		100	$800,000	$8,000	$792,000	$8,000
R013	1 St.	Arden Rd.	Willemar Ave.	$588,000		100	$588,000	$5,880	$582,120	$5,880
R014	10 St.	Willemar Ave.	McPhee Ave.	$192,000		65	$124,800	$1,248	$123,552	$68,448
R015	Mission Rd.	Muir Rd.	Lerwick Rd.	$750,000		65	$487,500	$4,875	$482,625	$267,375
R016	32 Ave.	256 St.	29 Ave.	$300,000		100	$300,000	$3,000	$297,000	$3,000
R017	88 Ave.	206 St.	207 St.	$60,000		65	$39,000	$390	$38,610	$21,390
R018	62 Ave.	203 St.	204 St.	$182,000		65	$118,300	$1,183	$117,117	$64,883
			Totals	$19,839,000	$4,279,500		$13,406,150	$134,063	$13,272,087	$2,287,413

Example 6.9
Net DCC Recoverable Calculation

Net DCC Recoverable Amount =
Net Recoverable DCC Program Cost – Existing DCC Reserve Account Monies
$13,216,102 - $293,500 = $12,922,602

Given:
Net DCC program recoverable (1997-2006) = $13,216,102

Existing DCC Reserve Account (as at Dec. 31, 1996) = $293,500

Example 6.9 shows the deduction of existing DCC reserve monies.

If no DCC bylaw has ever been adopted in the municipality (i.e., there are no existing DCC reserves), the net amount to be paid by DCCs is simply the net DCC program recoverable cost.

In summary, the following deductions should be made to the total capital costs to arrive at the net DCC recoverable amount:

- government grants and other funding contributions;
- the portion of costs not attributable to new development;
- the amount representing the municipal assist factor contribution; and,
- any existing DCC reserve monies.

7. CALCULATING DCCS

The technical procedure for calculating DCCs includes estimating new development (Chapter 4), compiling a DCC program (Chapter 5), and determining the net DCC recoverable amount (Chapter 6). This chapter discusses the last step to determining the charges: comparing the impact of different types of land use on each category of infrastructure in relation to the amount of new development. On the basis of the DCC inputs established in earlier chapters, various DCC calculation methodologies for roads, storm drainage, sanitary, water, and parkland are outlined in the following sections.

Approaches to DCC Calculation Methodology

The legislative basis for the various approaches to DCC calculation methodology is contained in the *Local Government Act*. Section 934 specifies that DCCs may be determined for different zones, uses, numbers of lots or units in a development, sizes, or capital costs as they relate to different classes of development. Therefore, some means for comparing the impact of different types of land use on each municipal service should be established. In general, for residential and institutional land use, the amount of new development is related to the population being served, such as residents, patients, or students. For commercial and industrial land uses, quantifying new development depends on the product and process involved, and the impact can vary significantly from building to building. However, unless the exact types of specific development are known in advance, the approach to the DCC calculation methodology has been to use broad averages for estimating impact. The disadvantage of broad averages is that industries such as water bottling and food processing operations may greatly exceed average demand/generation for water and sewer, so the figures should be applied cautiously. Regardless of the type of development, impact should be based on statistically significant information such as traffic generated, impervious surfaces, consumption, or flow. DCCs are not levies imposed on the basis of the ability to pay, property assessment values, retail sales, or the size of a company.

Road DCCs

For road charges, the net DCC recoverable amount can be distributed amongst new development in proportion to the traffic volume generated by the respective land uses using the road facilities.

Widely accepted by many local governments, the comparison of traffic generation rates for various land uses may be based on the Institute of Transportation Engineers (ITE) manual titled, *Trip Generation* (ITE, 1991). Trip rates are commonly measured in units known as "trip ends." ITE defines a "trip end" to mean a single or one-directional vehicle movement (i.e., either exiting or entering) a particular site. Although the ITE manual measures the trip rates for various conditions, the average trip rate for the afternoon (i.e., p.m.) peak hour of the generator is suggested as the common basis for comparing road impact for DCC calculation purposes. This is because road capacity is related to peak hour needs, rather than average traffic, and greater amounts of traffic are experienced during afternoons, as opposed to mornings.

More than 100 land use codes are classified by ITE in their manual. Further, the trip rates are expressed in various units including persons, dwelling units, gross floor area, and gross site area. Therefore, selection of the code that best corresponds to the DCC categories in the appropriate units for which the charges are being determined must be made. If a density gradient is the basis for how residential land uses will be charged, typical building forms that best correspond to the gross density ranges should be carefully chosen. Discretion should also be used when selecting codes for non-residential land uses. For example, the trip generation manual includes a variety of commercial uses with a wide range of trip rates such as "General Office Building" (Code 710), "Shopping Centre less than 10,000 square feet" (Code 820), and "Business Park" (Code 770).

Sometimes, the distinction between codes is not clear, such as between "General Heavy Industrial" (Code 120) and "Manufacturing" (Code 140). And in other instances, very little information exists, such as institutional land uses. The rationale for selecting a particular trip rate to represent a certain DCC land use category should be documented.

The ITE manual does not provide information on the amount of truck traffic, as compared to passenger vehicles. However, trucks have a greater impact on roads than passenger vehicles, in terms of capacity, durability, and construction of roads. Some estimate of truck traffic in relation to the various land uses may be available in engineering documents, and the effect of trucks can be factored into traffic impact considerations. In some municipalities, one truck is estimated to be equivalent to three passenger vehicles.

Traffic generation can also be impacted by another effect known as "pass-by" trips. These trips are those made as intermediate stops on the way from an origin to a primary trip destination and apply especially to commercial developments. Although the ability to quantify pass-by trips may be complicated, the ITE manual suggests an estimate of 25% of all traffic volumes are trips of this type.

A weighted trip rate can be developed to take into account truck traffic and pass-by trips, as shown in Example 7.1.

Using the respective weighted trip rate for DCC categories, the total trip ends from all land uses projected from new development for either a fixed time period or to build out can be determined. Dividing the net amount to be paid by DCCs by the total trip ends results in a unit DCC per trip end. Multiplying the DCC per trip end by the trip rate for the respective land use yields a schedule of road DCCs. A sample calculation is provided in Example 7.2 on the following page.

Storm Drainage DCCs

The need for storm drainage works is directly related to the potential runoff generated by developments in different land use zones (and not population). Therefore, storm drainage DCCs should be based on the relative runoff potential for various land uses. The most significant factor that influences the amount of runoff produced is the imperviousness of the development site, and for all intents and purposes, the runoff coefficient is equal to the percentage of impervious. Urban development increases the amount of impervious areas as a result of the construction of roads, driveways, parking lots, and rooftops. The more impervious surfaces in a watershed, the greater the increase in runoff peak and volume, in comparison to pre-development conditions. Drainage improvements are demanded in response to these impacts.

To determine the relative runoff potential between residential, commercial, industrial, and institutional categories, the total area accommodated by each land use should be calculated from the new development projections and respective gross unit densities. The minimum lot sizes and floorspace ratios are often found in background documents such as the Zoning Bylaw or other planning reports.

Example 7.1
Weighted Trip Generation Rates

R_C = (1.48/1000)/0.3048^2
= 0.016 AVTE per m^2

R_T = F x R_C
= 3 x 0.016 = 0.048 AVTE per m^2

R_W = (1 – P) x R_C] x (1 – T) + (R_T x T)
= (1 – 0.25) x 0.016] x (1 – 0.05) + (0.048 x 0.05)
= 0.014 AVTE per m^2 gross floor area

Given:
Commercial Trip Rate (AVTE, pm Pk Hr for car) = R_C
Commercial Trip Rate (AVTE, pm Pk Hr for truck) = R_T
Weighted Commercial Trip Rate (AVTE, pm Pk Hr) = R_W
Pass-by Trips (%) = P
Truck Traffic (%) = T
Truck Impact Factor = F

Assumptions:
Business Park (Code 770) = 1.48 AVTE per 1000 ft^2, pm Pk Hr for car
P = 25%
T = 5%
F = 3

Example 7.2
Road DCC Calculation

A: Traffic Generation Calculation

Land Use	Col. (1) Estimated New Development	Col. (2) Wt. Trip Rate (AVTE, pm Pk Hr per unit)	Col. (3) = (1) x (2) Total Trip Ends
Low Density Residential	1,985 dwelling units	1.02	2,025
Medium Density Residential	827 dwelling units	0.66	546
High Density Residential (1)	331 dwelling units	0.62	205
High Density Residential (2)	165 dwelling units	0.40	66
Commercial	51,380 m^2 gross floor area	0.014	706
Industrial	23.08 ha gross site area	27.75	641
Institutional	50,000 m^2 gross floor area	0.018	901
		Total Trip Ends	**5,089(a)**

B: Unit Road DCC Calculations

Net Road DCC Program Recoverable	$13,272,089	(b)
Existing Road DCC Reserve Monies	$(293,500)	(c)
Net Amount to be Paid by DCCs	$12,978,588	(d) = (b) – (c)
DCC per Trip End	$2,550.42	(e) = (d) / (a)

C: Resulting Road DCCs

Low Density Residential	$2,601 per dwelling units	(e) x Col. (2)
Medium Density Residential	$1,683 per dwelling units	(e) x Col. (2)
High Density Residential (1)	$1,581 per dwelling units	(e) x Col. (2)
High Density Residential (2)	$1,020 per dwelling units	(e) x Col. (2)
Commercial	$35.04 per m^2 gross floor area	(e) x Col. (2)
Industrial	$70,784 per ha gross site area	(e) x Col. (2)
Institutional	$45.93 per m^2 gross floor area	(e) x Col. (2)

Typically, 20% of a parcel's gross area is used for road and servicing rights-of-ways. As an example, average gross densities can be assumed for the residential DCC categories as shown in Table 7.1.

Table 7.1
Average Gross Density For Residential DCC Categories

DCC Categories	Gross Unit Density
Low Density Residential	10 units per gross ha
Medium Density Residential	30 units per gross ha
High Density Residential (1)	60 units per gross ha
High Density Residential (2)	75 units per gross ha

Values for the runoff coefficient for various land uses may be found in engineering documents such as the Subdivision Control Bylaw or Engineering Design Criteria Manual. An example of typical runoff coefficients for various land uses is shown in the Table 7.2.

Table 7.2
Typical Runoff Coefficients for Various Land Uses

Land Use	Typical Runoff Coefficients
Low Density Residential	0.40 (i.e., 40% of the site is impervious)
Medium Density Residential	0.65 (i.e., 65% of the site is impervious)
High Density Residential (1)	0.80 (i.e., 80% of the site is impervious)
High Density Residential (2)	0.80 (i.e., 80% of the site is impervious)
Commercial	0.90 (i.e., 90% of the site is impervious)
Industrial	0.90 (i.e., 90% of the site is impervious)
Institutional	0.85 (i.e., 85% of the site is impervious)

Using the runoff coefficients, the total amount of impervious surface area for each land use can be calculated. The total impervious area may be related to low density residential land use through the concept of "equivalent drainage units" (EDU's). An EDU is the amount of impervious area of a low-density residential unit

For example, at a density of 10 units per hectare with a runoff coefficient of 0.40, one unit has an impervious area of 400 m^2. In comparison, medium density residential at density of 30 units per hectare with a runoff coefficient of 0.65 has an impervious area of 217 m^2. Thus in terms of imperviousness, one unit of medium density residential is equivalent to 217/400 or 0.54 of a low-density residential unit. This ratio is known as the "equivalence factor." In this manner, the total equivalent drainage units can be determined.

Dividing the net amount to be paid by DCCs by the total equivalent drainage units results in a DCC per EDU. The storm drainage DCC for each land use is calculated by multiplying the DCC per EDU by the equivalence factor. A sample calculation is provided in Example 7.3 on the following page.

Sanitary DCCs

Sanitary DCCs are based on the premise that expansion and upgrading of sewerage facilities are demanded by population growth. For residential land use, typical occupancy rates were discussed in Chapter 4 on projected residential development. The impact on the sanitary sewer system from non-residential land uses is commonly expressed as a population density or as an area based demand. For example, a typical range of equivalent density is 62 to 93 m^2 per person (1 to 1.5 persons per 1,000 $ft.^2$ gross floor area) for commercial and institutional land. An area based demand can be converted to an equivalent population demand. For example, a typical commercial or industrial flow is 22,500 L/day/ha of gross site area, while the typical average per capita flow is 350 L/day. Thus the equivalent population can be calculated, as shown in Example 7.4 below.

Based on the average population densities for the various land uses, the total equivalent service population can be calculated. Dividing the net amount to be paid by DCCs by the total equivalent service population results in a DCC per capita. The sanitary DCC for each land use is then established by multiplying the DCC per capita by the average population densities for the respective development units. An example of the sanitary DCC calculation is provided in Example 7.5 on page 62.

Example 7.4
Equivalent population of Non-Residential Land Uses for Sanitary Impact

$$P_{EQ} = Q_N/Q_R = \frac{\underline{22{,}500\ \text{L/day/ha}}}{350/\text{L/day}} = 64.3\ \text{pers/ha}$$

Given:

Average generation (L/day/ha gross site area) = Q_N
Average per capita flow (L/day/capita) = Q_R
Equivalent Population = P_{EQ}

Assumptions:
Q_N = 22,500 L/day/ha
Q_R = 350/day/ha

Example 7.3
Storm Drainage DCC Calculation

A: Drainage Impact Calculation

Land use	Col. (1) Unit of Development	Col. (2) Density/FSR/Site Coverage	Col. (3) Runoff Coefficient	Col. (4) = [(1) / (2)] x (3) Impervious Area per Unit of Development (m^2)	Col. (5) Equivalence Factor	Col. (6) Estimated New Development	Col. (7) = (5) x (6) Equivalent Drainage Units
Low Density Residential	I dwelling unit	10 lots per gross ha	0.40	400 (a)	1.00 (a) / (a)	1,985	1,985
Medium Density Residential	I dwelling unit	30 units per gross ha	0.65	217 (b)	0.54 (b) / (a)	827	448
High Density Residential (1)	I dwelling unit	60 units per gross ha	0.80	133 (c)	0.33 (c) / (a)	331	110
High Density Residential (2)	I dwelling unit	75 units per gross ha	0.80	107 (d)	0.27 (d) / (a)	165	44
Commercial	1 m^2 gross floor area	70% site coverage	0.90	1.3 (e)	0.0032 (e) / (a)	51,380	165
Industrial	1 ha gross site area		0.90	9,000 (f)	22.5 (f) / (a)	23.08	519
Institutional	1 m^2 gross floor area	70% site coverage	0.85	1.2 (g)	0.0030 (g) / (a)	50,000	152
						Total EDU's	**3,424 (h)**

B: Unit DCC Calculation

Net Storm Drainage DCC Program Recoverable	$4,986,383	(i)
Existing Storm Drainage DCC Reserve Monies	$(201,108)	(j)
Net Amount to be Paid by DCCs	$4,785,275	(k) = (i) – (j)
DCC per Equivalent Drainage Unit	$1,397.76	(l) = (k) / (h)

C: Resulting Storm Drainage DCCs

Low Density Residential	$1,398	per dwelling unit	(l) x Col. (5)
Medium Density Residential	$757	per dwelling unit	(l) x Col. (5)
High Density Residential (1)	$466	per dwelling unit	(l) x Col. (5)
High Density Residential (2)	$373	per dwelling unit	(l) x Col. (5)
Commercial	$4.49	/m^2 gross floor area	(l) x Col. (5)
Industrial	$31,450	/ha gross site area	(l) x Col. (5)
Institutional	$4.24/	m^2 gross floor area	(l) x Col. (5)

Example 7.5
Sanitary DCC Calculation

A: Equivalent Population Calculation

Land Use	Col. (1) Estimated New Development	Units	Col. (2) Density or Equivalent Population Factor		Col. (3) = (1) x (2) Equivalent Population
Low Density Residential	1,985	dwelling units	3.2	persons per dwelling unit	6,352
Medium Density Residential	827	dwelling units	2.5	persons per dwelling unit	2,068
High Density Residential (1)	331	dwelling units	1.7	persons per dwelling unit	562
High Density Residential (2)	165	dwelling units	1.4	persons per dwelling unit	232
Commercial	51,380	m^2 gross floor area	0.013	persons per m^2 gross floor area	661
Industrial	23.08	ha gross site area	64.3	persons per ha gross site area	1,484
Institutional	50,000	m^2 gross floor area	0.011	persons per m^2 gross floor area	538
				Total Equivalent Population	11,896 (a)

B: Unit DCC Calculation

Net Sanitary DCC Program Recoverable	$7,650,473	(b)
Existing Sanitary DCC Reserve Monies	$(853,264)	(c)
Net Amount to be Paid by DCCs	$6,797,209	(d) = (b) – (c)
DCC per Equivalent Person	$571.39	(e) = (d) / (a)

C: Resulting Sanitary DCCS

Low Density Residential	$1,828	per dwelling unit	(e) x Col. (2)
Medium Density Residential	$1,428	per dwelling unit	(e) x Col. (2)
High Density Residential (1)	$971	per dwelling unit	(e) x Col. (2)
High Density Residential (2)	$800	per dwelling unit	(e) x Col. (2)
Commercial	$7.35	/m^2 gross floor area	(e) x Col. (2)
Industrial	$36,732	/ha gross site area	(e) x Col. (2)
Institutional	$6.15	/m^2 gross floor area	(e) x Col. (2)

Water DCCs

Impact on the water supply and distribution system arises from both domestic (peak day and peak hour) demand and the requirement to provide adequate flows for fire protection. Both domestic or daily flows and fire flows vary, but to differing extents, with land use. The sizing of overall facilities has been found to be primarily dependent on peak day and peak hour flows. Therefore, allocation of net DCC recoverable costs between land uses is dependent on their relative impacts on the water system. The comparative impact on the water system can be expressed in terms of domestic demand which in turn relates to population density or for non-residential development, equivalent population density. Typical population densities for residential land uses can be applied in a manner similar to that which is used for the sanitary DCC calculation. Similarly, an area based demand may be expressed as an equivalent population demand. A typical industrial or commercial demand is 22,500 L/day/ha of gross site area; in comparison, the typical average per capita flow is 500 L/day. The calculation of equivalent population for non-residential land uses is shown in Example 7.6.

With average population densities for the various land uses, the total equivalent population can be calculated. Dividing the net amount to be paid by DCCs by the total equivalent service population results in a DCC per EDU. The water DCC for each land use is established by multiplying the DCC per capita by the per person densities for the respective land use development unit. Example 7.7 shows the water DCC calculation (page 64).

Parkland DCCs

Since people generate the need for park and open space, DCCs are based on the relative impact of each land use according to the same equivalent population factors that were used to derive sanitary and water DCCs. If non-residential land uses have been considered to benefit from the provision of parkland (discussion in Chapter 2) and thus will be charged DCCs, then equivalent populations for these uses must be determined as well. *Circular No. 97:04 ParkLand Development Cost Charges, 1997 (See Appendix D).*

To obtain a schedule of parkland DCCs, the following steps should be completed: determine the total equivalent population; divide the net DCC recoverable amount by the total equivalent population to obtain a per capita DCC; and multiply the DCC per capita by the population density for the respective development unit.

A sample parkland DCC calculation is provided in Example 7.8 on page 65.

Example 7.6
Equivalent Population of Non-Residential Land Uses for Water Impact

$$P_{EQ} = Q_N/Q_R = \frac{22{,}500\ \text{L/day/ha}}{500/\text{L/day}} = 45\ \text{pers/ha}$$

Given:

Average demand (L/day/ha gross site area) = Q_N
Average per capita demand (L/day/capita) = Q_R
Equivalent Population = P_{EQ}

Assumptions:
Q_N = 22,500 L/day/ha
Q_R = 500/L/day

Example 7.7
Water DCC Calculation

A: Equivalent Population Calculation

Land Use	Col. (1) Estimated New Development	Units	Col. (2) Density or Equivalent Population Factor		Col. (3) = (1) x (2) Equivalent Population
Low Density Residential	1,985	dwelling units	3.2	persons per dwelling unit	6,352
Medium Density Residential	827	dwelling units	2.5	persons per dwelling unit	2,068
High Density Residential (1)	331	dwelling units	1.7	persons per dwelling unit	562
High Density Residential (2)	165	dwelling units	1.4	persons per dwelling unit	232
Commercial	51,380	m^2 gross floor area	0.009	persons per m^2 gross floor area	462
Industrial	23.08	ha gross site area	45	persons per ha gross site area	1,039
Institutional	50,000	m^2 gross floor area	0.011	persons per m^2 gross floor area	538
				Total Equivalent Population	**11,253 (a)**

B: Unit DCC Calculation

Net Water DCC Program Recoverable	$5,186,905	(b)
Existing Water DCC Reserve Monies	$(734,583)	(c)
Net Amount to be Paid by DCCs	$4,452,322	(d) = (b) – (c)
DCC per Equivalent Person	$395.67	(e) = (d) / (a)

C: Resulting Parkland DCC

Low Density Residential	$1,266	per dwelling unit	(e) x Col. (2)
Medium Density Residential	$989	per dwelling unit	(e) x Col. (2)
High Density Residential (1)	$673	per dwelling unit	(e) x Col. (2)
High Density Residential (2)	$554	per dwelling unit	(e) x Col. (2)
Commercial	$3.56	/m^2 gross floor area	(e) x Col. (2)
Industrial	$17,805	/ha gross site area	(e) x Col. (2)
Institutional	$4.26	/m^2 gross floor area	(e) x Col. (2)

Example 7.8 Parkland DCC Calculation				
A: Equivalent Population Calculation				
Land Use	**Estimated New Development**	**Equivalent Population Factor**		**Equivalent Population**
Low Density Residential	1,985 dwelling units	3.2	persons per dwelling unit	6,352
Medium Density Residential	827 dwelling units	2.5	persons per dwelling unit	2,068
High Density Residential (1)	331 dwelling units	1.7	persons per dwelling unit	562
High Density Residential (2)	165 dwelling units	1.4	persons per dwelling unit	232
			Total Equivalent Population	**9,213 (a)**
B: Unit DCC Calculation				
Net Parkland DCC Program Recoverable	$6,627,922	(b)		
Existing Parkland DCC Reserve Monies	$(362,706)	(c)		
Net Amount to be Paid by DCCs	$6,265,216	(d) = (b) – (c)		
DCC per Equivalent Person	$680.02	(e) = (d) / (a)		
C: Resulting Parkland DCC				
Low Density Residential	$2,176 per dwelling unit	(e) x Col. (2)		
Medium Density Residential	$1,700 per dwelling unit	(e) x Col. (2)		
High Density Residential (1)	$1,156 per dwelling unit	(e) x Col. (2)		
High Density Residential (2)	$952 per dwelling unit	(e) x Col. (2)		

8. BYLAW PRESENTATION

This chapter outlines how the DCC bylaw and supporting documentation should be presented, once the charges have been determined using the appropriate DCC calculation methodology. A comprehensive but clear compilation of all data, assumptions, rationales, and calculations is important for three reasons: to assist in the Ministry's review of the bylaw, to facilitate monitoring and tracking of projects after the bylaw has been adopted, and to serve as a good starting point for future bylaw amendments.

Legislative Basis

Section 934 (5) of the *Local Government Act* states that a local government must make available to the public, the information used to formulate DCCs such as considerations, information, and calculations, with the exception of the contemplated acquisition costs of specific properties.

Further, the guiding principle of accountability requires that DCCs be developed through a transparent municipal process. Therefore, all documentation related to the charges should be accessible as well as understandable to the stakeholders.

DCC Bylaw

A DCC bylaw is a relatively brief document with the standard preamble clauses and bylaw features. A section on definitions or calculation of area may be helpful as well.

The DCC rates for the various categories of infrastructure are usually presented in a series of Schedules that accompany the bylaw. The schedule should summarize the charges for the applicable land uses, based on the representative unit of development.

Supporting Documentation

All data, assumptions, and rationale used to develop DCCs should be included in a supporting document to the DCC bylaw. This background report, accompanied by the bylaw will be reviewed by the Ministry before statutory approval is granted. It will also be made available to the public, upon request.

The supporting documentation will allow the validity of the assumptions made in formulating the proposed DCCs to be monitored over time. As the need for revisions becomes evident, an update to the DCC program can easily be made, if the assumptions are clearly laid out.

The background report should be written in plain language so that it will be easily understood by all stakeholders. Information in the report should include a summary of capital cost and revenue assumptions as well as an outline of the various methodologies used to derive the charges.

A suggested table of contents for the supporting documentation is presented in Table 8.1.

Table 8.1
Suggested Table of Contents for DCC Background Report

Executive summary		
1.0	Introduction	
	1.1	Objectives
	1.2	Background
	1.3	Guiding Principles
	1.4	Use of Best Practice Guides
2.0	General Considerations	
	2.1	Legislative and Regulatory Background
	2.2	Public Participation Process
	2.3	Bylaw Exemptions
	2.4	Collection Charges
	2.5	In-Stream Applications
	2.6	Municipal Assist Factor
3.0	Growth Projections and Planning Assumptions	
	3.1	Relationships to Other Municipal Documents
	3.2	Estimation of New Development
	3.3	Projected Residential Development Units
	3.4	Commercial Development Projection
	3.5	Institutional Development Projection

Table 8.1 Continued...

- 4.0 Road Development Cost Charges
  - 4.1 Road DCC Program
  - 4.2 Traffic Generation and Calculation of Road Impact
  - 4.3 Development Cost Charge Calculation for Road
  - 4.4 Breakdown of Road DCC Burden and Projection of Yearly DCC Revenues

- 5.0 Storm Drainage Development Cost Charges
  - 5.1 Storm Drainage DCC Program
  - 5.2 Imperviousness and Calculation of Equivalent Drainage Units
  - 5.3 Development Cost Charge Calculation for Storm Drainage
  - 5.4 Breakdown of Storm Drainage DCC Burden

- 6.0 Sanitary Development Cost Charges
  - 6.1 Sanitary DCC Program
  - 6.2 Sewage Generation and Calculation of Equivalent Population
  - 6.3 Development Cost Charge Calculation for Sanitary
  - 6.4 Breakdown of Sanitary DCC Burden and Projection of Yearly DCC Revenues

- 7.0 Water Development Cost Charges
  - 7.1 Water DCC Program
  - 7.2 Water Demand and Calculation of Equivalent Population
  - 7.3 Development Cost Charge Calculation for Water
  - 7.4 Breakdown of Water DCC Burden and Projection of Yearly DCC Revenues

- 8.0 Parkland Development Cost Charges
  - 8.1 Parkland Acquisition and Improvement DCC Program
  - 8.2 Calculation of Equivalent Population
  - 8.3 Development Cost Charges for Parkland
  - 8.4 Breakdown of Parkland DCC Burden and Projection of Yearly DCC Revenues

- 9.0 Summary of Development Cost Charges
  - 9.1 Summary of Proposed DCCs
  - 9.2 Comparison to Current DCCs

References

Appendices

Appendix A	*Local Government Act* Excerpts
Appendix B	Record of Public Correspondence Received
Appendix C	Project Detail Sheets

Supporting documentation should also include a completed copy of the Ministry Submission Summary Checklist. A blank copy of this form is enclosed in Appendix A.

INDEX

- ACAMAR STONEY CREEK DEVELOPMENT INC. V. SURREY (CITY) 34
- BENEFIT ALLOCATION 51-54
- BOND APPENDIX C
- CAPITAL EXPENDITURE PLAN (CEP) 7, 9, 19, 26, 28, 35-36, 47
- COHO CREEK ESTATES LTD. V. DISTRICT OF MAPLE RIDGE 34
- *DEVELOPMENT CHARGES ACT OF ONTARIO* (1990) 13
- DEVELOPMENT COST CHARGES (DCCS):
  - AREA SPECIFIC CHARGE 3, 16-18, 20-21, 35, 39-40, 44, 61
  - BACKGROUND REPORT 67
  - BUILD OUT DCC PROGRAM 13, 19-20, 39-40, 44, 47-48, 58
  - BYLAW APPROVAL 1, 9, 67
  - BYLAW PRESENTATION 67, 68
  - COMMERCIAL CHARGES 23-25, 32, 44-45, 57, 59, 61-62, 64-65
  - COLLECTION AT BUILDING PERMIT ISSUANCE 7, 24-25, 30-34, 51
  - COLLECTION AT SUBDIVISION APPROVAL 25, 31-33
  - CREDITS 31, 33-35
  - DEFINITION OF DCCS 1, 7
  - INDUSTRIAL CHARGES 17, 23-25, 32, 44-45, 57, 59, 61-62, 64-65
  - INSTITUTIONAL CHARGES 20-21, 23-25, 32, 46, 57, 59, 61-62, 64-65
  - LEGISLATION APPENDIX B
  - MAJOR DCC BYLAW AMENDMENT 36
  - MINOR DCC BYLAW AMENDMENT 35
  - MONITORING AND ACCOUNTING OF DCC FUNDS 32-33
  - MUNICIPAL-WIDE CHARGE 13, 16-18, 20, 35, 39, 44, 52, 61
  - ON A FLOORSPACE BASIS 23-25, 31-32, 39-40, 44-46
  - PARKLAND ACQUISITION AND IMPROVEMENT DCCS 19-20, 27-28, 63-65, APPENDIX D
  - PER DEVELOPMENT UNIT 23-25, 31-32, 39, 47
  - REBATES 33-35
  - RECOVERABLE COSTS 20, 28-29, 47, 54-55
  - REGIONAL DCCS 26-27
  - RESERVES 32-54
  - RESIDENTIAL DCCS 20-25, 31, 39-43, 57, 59-62, 64-65
  - REVOLVING DCC PROGRAM 19-20, 29, 39-40, 44, 47
  - ROAD DCCS 17, 26, 52, 57
  - SANITARY SEWER DCCS 18, 27, 52, 60-62
  - STORM DRAINAGE DCCS 17-18, 26-27, 32, 58-60
  - WATER DCCS 18, 27, 52, 63-64
- DEVELOPMENT PERMIT AREAS (DPAS) 28
- EQUIVALENCE FACTOR 60-61
- EQUIVALENT DRAINAGE UNITS 59-61
- EQUIVALENT POPULATION 21, 60-62, 63-65
- ESTIMATING NEW DEVELOPMENT 39-46
- ESTIMATION OF CAPITAL COSTS 47-48
- GOVERNMENT GRANTS 25, 29, 33, 35, 51, 54-56
- GRACE PERIODS 13, 31, 33-34
- *HIGHWAYS ACT* 51
- HOUSING STOCK COMPOSITION 39, 41
- HOUSING AFFORDABILITY 24
- IMPOST FEES 7-8
- INSTALLMENTS REGULATION APPENDIX C
- INSTREAM APPLICATIONS 33-34

Land Use Contracts 7-8, 16
Latecomer Agreements 8, 25-26, 28
Letter of Conditional Approval 34
Letter of Credit Appendix C
Local Government Act 1, 7-8, 25-27, 35
  section 329 9
  section 646 16
  section 834 (2) 9
  section 879 (1) 28
  section 932 7
  section 933 (1) 7
  section 933 (2) 7, 27, 29, 51
  section 933 (2) (b) 27
  section 933 (3) 8
  section 933 (4) 8
  section 933 (4) (b) 32
  section 933 (4) (b) (i) 25
  section 933 (4) (b) (ii) 32
  section 933 (5) 7, 31
  section 933 (6) 31
  section 933 (8) 34
  section 934 57
  section 934 (2) 7
  section 934 (3) 7, 20, 23
  section 934 (4) 9
  section 934 (4) (d) 8, 30
  section 934 (4) (d) (i) 47
  section 934(4) (d) (iii) 24
  section 934 (5) 67
  section 935 8
  section 935 (1) 32
  section 935 (3) (b) 27
  section 935 (3) (b) (ii) 27
  section 935 (3) (c) 29
  section 936 27
  section 936 (2) 27
  section 936 (6) 32
  section 937 7, 35
  section 937 (1) 9
  section 937 (2) 9
  section 937 (5) 32
  section 937 (6) 32
  section 938 26
  section 939 8, 25
  section 941 28
  section 943 31-33
Local Government Definition 2
Local Government Grants Act 51
Local Improvement Program (LIP) 25, 28, 51
Master Sewerage Plans 18, 20, 27, 42
Master Transportation Plan 17, 20, 26, 42
Ministry of Transportation and Highways (MOTH) 47
Ministry Submission Summary Checklist Appendix A
municipal assist factor 8-10, 13, 29-30, 51, 54-56
occupancy rates 41

OFFICIAL COMMUNITY PLAN (OCP) 2, 9, 13, 16-17, 19-20, 22, 28, 30, 33 35-36, 39-40, 43, 45, 47
PARKS MASTER PLAN 20, 28, 47
PUBLIC PARTICIPATION 13-15
  SEE ALSO PUBLIC PROCESS 10, 36
RECOMMENDED BEST PRACTICES (RBPS) 3, 13, 17-20, 23, 25, 29, 31-34, 36
RESORT MUNICIPALITY OF WHISTLER ACT 7
SOCIAL HOUSING PROVISIONS 30
RUNOFF COEFFICIENTS 5, 8, 59-60
STORMWATER MANAGEMENT PLAN 17, 20, 26, 47
356226 BRITISH COLUMBIA LTD. V. CITY OF VANCOUVER 34
TRIP GENERATION (ITE, 1991) 57-59
VANCOUVER CHARTER 7
ZONING BYLAW 9, 19, 21-23, 39-40, 43, 45, 58-59

APPENDIX A:

MINISTRY SUBMISSION CHECKLIST

BRITISH
COLUMBIA

Ministry of
Municipal Affairs

Municipal Financial Service

MINISTRY REQUIREMENTS

> "The fundamental aim of the development cost charge concept is the establishment of a framework within which new capital cost burdens are distributed on an equitable basis between existing and future development." Municipal Manual (May 1986)

In the provincial review of a development cost charge bylaw, the primary objective is to see that this "framework" has been developed based on sound principles, sound facts and a logical rationale.

The Best Practices Guide is seen to assist in the development of that framework. If the framework is well structured and supporting documentation clearly referenced, then not only should it enable staff of the Municipal Financial Services Branch to reduce the turn-around time of DCC submissions to a minimum, but a greater benefit will be that future amendment work by local government staff should be much easier, with the methodology, criteria and numbers that formed the basis of the existing charges readily ascertainable.

The Ministry will be looking for the rationale for the formulation of each step of a development cost charge. Therefore, in your ministry submission, please outline the reason your municipality or regional district has selected an approach or made a decision, even if it has chosen a "Best Practice" from the Guide. All communities have unique features - if the "Best Practice" does not fit, then an acceptable alternative may be chosen. Again, please outline the rationale and how the "best practice" was inappropriate.

To help the Ministry follow your thinking, please be sure to describe any additional step or assumptions used beyond those in this guide.

Here are some key tips that will help ensure the Ministry can readily assess your submission:

1. If some specific issue does not apply for your particular submission, please note why (this makes clear that a point was not missed by accident).

2. The Ministry expects that, in most cases, a "Best Practice" or an "Alternative Best Practice" will be selected from those presented in the Best Practices Guide. It has already been pointed out that the Practice selected and the rationale for selecting it are key components of the submission. Therefore, where a "Best Practice" is not selected, it is useful to include as much explanatory material as you can. For example, the statement that "existing development is adequately serviced" should be supported with information that demonstrates why this is the case. (e.g., It may be that the local government has an annual capital program that systematically replaces existing infrastructure. In such a case, supporting documentation should reference the annual capital expenditure program.)

3. In the category of park land, please include in the submission an analysis, by class, of existing park land, current standards, and quantity expected to be funded by growth. In the category of park land improvements, please include a listing of the improvements to confirm that each item falls within the allowable categories (s. 935 (3)(b)(ii) *Municipal Act*).

The Ministry Submission Summary Checklist follows. The ministry wishes to thank the local government representatives on the editorial board for their recommendations on content and format of the checklist.

MINISTRY SUBMISSION SUMMARY CHECKLIST

(to be completed by local government)

MUNICIPALITY/REGIONAL DISTRICT ____________________

DCC BYLAW(S) NO.(S) ____________________

Is this bylaw a ☐ **New DCC Bylaw** ☐ **Major DCC Bylaw Amendment**
☐ **Minor DCC Bylaw Amendment**

Complete checklist by marking the appropriate boxes, and providing references to background material and other requested information. If DCC's are established on a basis *other than* *the DCC Recommended Best Practice, please provide a brief explanation for the approach used. If space is insufficient, feel free to reference pages in submission where this is covered or append additional pages.*

	DCC Recommended Best Practice	**Submission Page reference**
1.	Did the development of this DCC bylaw include: ☐ a full public process? ☐ input from stakeholders? ☐ Council input only?	
	Why? ____________________	
2.	Are the Road DCC's established: ☐ on a municipal-wide basis? ☐ on an area specific basis?	
	Why? ____________________	
3.	Are the Storm drainage DCC's established: ☐ on a municipal-wide basis? ☐ on an area specific basis?	
	Why? ____________________	

	DCC Recommended Best Practice	Submission Page reference
4.	Are the Sanitary sewer DCC's established: ☐ on a municipal-wide basis? ☐ on an area specific basis?	
	Why?____________________ ____________________ ____________________ ____________________	
5.	Are Water DCC's established: ☐ on a municipal-wide basis? ☐ on an area specific basis?	
	Why?____________________ ____________________ ____________________ ____________________	
6.	Are Park land and park land improvement DCC's established: ☐ on a municipal-wide basis? ☐ on an area specific basis?	
	Why?____________________ ____________________ ____________________ ____________________	
	Existing park standards/holdings ____________________ Park standards for DCC purposes ____________________	
7.	Is the DCC time frame: ☐ a specific term (_____ Years) tied into the time frame of the CEP? ☐ build out tied into the time frame of the CEP? ☐ other ____________________?	
	Why?____________________ ____________________ ____________________	

	DCC Recommended Best Practice	**Submission Page reference**
8.	Are residential DCC categories established on the basis of: ☐ density gradient? ☐ building form? ☐ other ______________________?	
	Why?______________________	
9.(a)	Are residential DCC's imposed on the basis of: ☐ development units? ☐ floor space? ☐ other ______________________?	
	Why?______________________	
9.(b)	Are commercial and institutional DCC's imposed on the basis of: ☐ floor space? ☐ other ______________________?	
	Why?______________________	
9.(c)	Are industrial DCC's imposed on the basis of: ☐ gross site area? ☐ other ______________________?	
	Why?______________________	

	DCC Recommended Best Practice	**Submission Page reference**
10.	Is the DCC program consistent with: ☐ the *Municipal Act*? ☐ Regional Growth Strategy? ☐ Official Community Plan? ☐ Master Transportation Plan? ☐ Master Parks Plan? ☐ Liquid Waste Management Plan? ☐ Affordable Housing Policy?	
	Why not?______________________________	
11.	Are DCC recoverable costs, consistent with Ministry policy, clearly identified in the DCC documentation: ☐ Cost allocation between new and existing? ☐ Grant Assistance? ☐ Developer Contribution? ☐ Municipal Assist Factor? ☐ Interim Financing? ☐ Interest on long-term debt is *excluded*? ☐ Other?	
	Why?______________________________	
	Is capital cost information provided for: ☐ Roads? ☐ Storm Drainage? ☐ Sanitary Sewer? ☐ Water? ☐ Park land? ☐ Park land improvements?	Ref. _____ Ref. _____ Ref. _____ Ref. _____ Ref. _____ Ref. _____

	DCC Recommended Best Practice	Submission Page reference
12.	Does the municipal assist factor reflect: ☐ the community's financial support towards the financing of services for development? ☐ other ______________________________?	
	Why?______________________________	
	Has a municipal assist factor been provided for: ☐ Roads? Assist factor ________% ☐ Storm Drainage? Assist factor ________% ☐ Sanitary Sewer? Assist factor ________% ☐ Water? Assist factor ________% ☐ Park land? Assist factor ________% ☐ Park land improvements? Assist factor ________%	
13.	Are DCC's for single family developments to be collected: ☐ at the time of subdivision approval? ☐ other ______________________________?	
	Why?______________________________	
14.	Are DCC's for multi-family and non-residential land uses to be collected: ☐ at the time of building permit issuance? ☐ other ______________________________?	
	Why?______________________________	

	DCC Recommended Best Practice	**Submission Page reference**
15.	Is a DCC monitoring and accounting system to provide a clear basis for the tracking of projects and the financial status of DCC accounts: ☐ in place? ☐ to be set up?	
	Why not?____________________ ____________________ ____________________ ____________________	
16.	Is a suitable period of notification before a new DCC bylaw is in effect, known as a grace period: ☐ provided for? ☐ other ____________________?	
	Why not?____________________ ____________________ ____________________ ____________________	
17.(a)	Does the DCC bylaw set out the situations in which a DCC credit or rebate are to be given? ☐ Yes ☐ No	
17.(b)	If no, has Council adopted a policy statement that clearly identifies situations in which a DCC credit or rebate should be given or would be considered by Council? ☐ Yes ☐ No If yes, a copy of the policy statement is included with this submission.	Ref. _____
17.(c)	Is a copy of the policy statement available to all stakeholders? ☐ Yes ☐ No	

	DCC Recommended Best Practice	Submission Page reference
	If no, why not? ____________________	
18.	Has a process to provide for minor routine amendments to the DCC bylaw to reflect changes in construction and other capital costs: ☐ been established? ☐ not considered necessary? ☐ other ____________________?	
	Why? ____________________	
19.	Has a process to provide for major amendments to the DCC bylaw, involving a full review of DCC issues and methodology, to be completed not more than once every five years: ☐ been established? ☐ not considered necessary? ☐ other ____________________?	
	Why? ____________________	
	Contact ____________ Position ____________ Phone ________ *Signed by ____________________ Position ____________________ * one of Head of engineering, finance or planning Signed by (second signature optional) ____________ Position ____________ Date ______________	

cc: Engineering, Planning, Finance (as appropriate)

MUNICIPALITY/REGIONAL DISTRICT ______________________

SUMMARY OF DCC's - BYLAW NO(S). ______________________

____

	Residential (per single family dwelling)	**Commercial** (per square metre)	**Industrial** (per hectare)	**Institutional** (per square metre)
Roads				
Storm Drainage				
Sanitary Sewer				
Water				
Park Land				
Park Land Improvements				
Total				

Note: If not on a municipal-wide basis, please indicate minimum and maximum charges.

For **amendment** bylaw, please indicate nature of change	Existing	Proposed
☐ New DCC service added	-------	
☐ Time horizon		
☐ Capital costs		
☐ Weighting of types of development (residential, commercial, industrial, etc.)		
☐ Potential development		
☐ Allocation of benefit between existing and potential units of development		
☐ Assist factor		
☐ Other: (please list) ☐ ____________ ☐ ____________ ☐ ____________ ☐ ____________		

APPENDIX B:

LOCAL GOVERNMENT ACT EXCERPTS

Definition:
"inspector" refers to the "Inspector of Municipalities"

Division 10 - Development Costs Recovery

Definitions

932 in this Division:
"**development**" means those items referred to in section 933 (1) (a) and (b) for which a development cost charge may be imposed;

"**local government**" includes a greater board other than the Board of the Greater Vancouver Sewerage and Drainage District;

THE FOLLOWING DEFINITION HAS NOT YET BEEN BROUGHT INTO FORCE. IT WILL REPLACE SECTION 935 (4).

"**capital costs**" includes:
(a) planning, engineering, legal and interest costs directly related to the work for which a capital cost may be incurred under this Division; and,
(b) interest costs directly related to the work that are approved by the inspector to be included in the capital cost.

Development cost charges generally

933 (1) A local government may, by bylaw, for the purpose described in subsection (2), impose development cost charges on every person who obtains
  (a) approval of a subdivision, or
  (b) a building permit authorizing the construction, alteration or extension of a building or structure.

(2) Development cost charges may be imposed under subsection (1) for the purpose of providing funds to assist the local government to pay the capital costs of
  (a) providing, constructing, altering or expanding sewage, water, drainage and highway facilities, other than off-street parking facilities, and
  (b) providing and improving parkland to service, directly or indirectly, the development for which the charge is being imposed.

(3) A development cost charge is not payable if
  (a) the development does not impose new capital cost burdens on the municipality, regional district or greater board, or
  (b) a development cost charge has previously been paid for the same development unless, as a result of further development, new capital cost burdens will be imposed on the municipality, regional district or greater board.

(4) A charge is not payable under a bylaw made under subsection (1) if any of the following applies in relation to a development authorized by a building permit:
  (a) the permit authorizes the construction, alteration or extension of a building or part of a building that is, or will be, after the construction, alteration or extension, exempt from taxation under section 339 (1) (g);
  (b) the permit authorizes the construction, alteration or extension of a building that will, after the construction, alteration or extension,
    (i) contain fewer than 4 self-contained dwelling units, and
    (ii) be put to no other use other than the residential use in those dwelling units;

(c) the value of the work authorized by the permit does not exceed $50 000 or any other amount the minister may, by regulation, prescribe.

(5) A development cost charge that is payable under a bylaw under this section must be paid at the time of the approval of the subdivision or the issue of the building permit.

(6) As an exception to subsection (5), the minister may, in respect of all or different classes of developments, by a regulation, authorize the payment of development cost charges in instalments and prescribe conditions under which the instalments may be paid.

(7) Despite a bylaw under subsection (1), if
  (a) a local government has imposed a fee or charge or made a requirement under
    (i) section 363 [*imposition of fees and charges -- municipal*],
    (ii) Division 11 of this Part, or
    (iii) section 729 of the *Municipal Act*, R.S.B.C. 1979, c. 290, before the repeal of that section became effective, for parkland or for specific services outside the boundaries of land being subdivided or developed, and
  (b) the parkland or services referred to in paragraph (a) are included in the calculations used to determine the amount of a development cost charge, the amount of the fee or charge imposed or the value of the requirement made, as referred to in paragraph (a), must be deducted from those classes of development cost charges that are applicable to the parkland or the types of services for which the fee or charge was imposed or the requirement was made.

(8) Despite a bylaw under subsection (1),
  (a) if an owner has, with the approval of the local government, provided or paid the cost of providing a specific service, outside the boundaries of land being subdivided or developed, that is included in the calculations used to determine the amount of a development cost charge, the cost of the service must be deducted from the class of development cost charge that is applicable to the service, and
  (b) if a work required to be provided under an agreement under section 937.1 (2) is included in the calculations used to determine the amount of a development cost charge, the following amounts are to be deducted from the development cost charge that would otherwise be payable for that class of work:
    (i) for a development cost charge payable by a developer for a work provided by the developer under the agreement, the amount calculated as
      (A) the cost of the work
      less
      (B)the amount to be paid by the municipality to the developer under section 937.1 (3) (b), other than an amount that is an interest portion under section 937.1 (6) (c);
    (ii) for a development cost charge payable by a person other than the developer referred to in subparagraph (i), the amount calculated as
      (A)the amount charged under section 937.1 (2) (b) to the owner of the property
      less
      (B)any interest portion of that charge under section 937.1 (6) (c).

(9) If a board or greater board has the responsibility of providing a service or parkland referred to in subsection (2) in a participating municipality, the board or greater board may, by bylaw under subsection (1), impose a development cost charge that is applicable within that municipality.

(10) The municipality must collect and remit a development cost charge imposed under subsection (9) to the regional district or greater board in the manner provided for in the bylaw.

(11) As a limitation on section 176 (1) (c) [*corporate powers -- assistance*] and section 183 [*assistance under partnering agreements*], a local government must not provide assistance by waiving or reducing a charge under this section.

(12) As an exception to subsection (11), a local government may provide assistance by waiving or reducing a charge under this section for not-for-profit rental housing.

Amount of development cost charges

934 (1) A bylaw that imposes a development cost charge must specify the amount of the charge in a schedule or schedules of development cost charges.

(2) Development cost charges may vary as provided in subsection (3), but must be similar for all developments that impose similar capital cost burdens on the local government.

(3) Development cost charges may vary with respect to one or more of the following:
(a) different zones or different defined or specified areas;
(b) different uses;
(c) different capital costs as they relate to different classes of development;
(d) different sizes or different numbers of lots or units in a development.

(4) In setting development cost charges in a bylaw under section 933 (1), a local government must take the following into consideration:
(a) future land use patterns and development;
(b) the phasing of works and services;
(c) the provision of parkland described in an official community plan;
(d) whether the charges
  (i) are excessive in relation to the capital cost of prevailing standards of service,
  (ii) will deter development, or
  (iii) will discourage the construction of reasonably priced housing or the provision of reasonably priced serviced land in the municipality or regional district.

(5) A local government must make available to the public, on request, the considerations, information and calculations used to determine the schedule referred to in subsection (1), but any information respecting the contemplated acquisition costs of specific properties need not be provided.

Use of development cost charges

935 (1) A development cost charge paid to a local government must be deposited by the local government in a separate special development cost charge reserve fund established for each purpose for which the local government imposes the development cost charge.

(2) *Sections 336 [investment of municipal funds] and 501 [transfer between funds],* apply to a fund established under subsection (1) of this section, subject to the restriction that a bylaw under section 501 authorizing the transfer of an amount from the fund must receive the approval of the minister.

(3) Money in development cost charge reserve funds, together with interest on it, may be used only for the following:

(a) to pay the capital costs of providing, constructing, altering or expanding sewage, water, drainage and highway facilities, other than off-street parking, that relate directly or indirectly to the development in respect of which the charge was collected;

(b) to pay the capital costs of
  (i) acquiring parkland or reclaiming land as parkland, or
  (ii) providing fencing, landscaping, drainage and irrigation, trails, restrooms, changing rooms and playground and playing field equipment on parkland, subject to the restriction that the capital costs must relate directly or indirectly to the development in respect of which the charge was collected;

(c) to pay principal and interest on a debt incurred by a local government as a result of an expenditure under paragraph (a) or (b).

SUB-SECTION (4) WILL BE REPEALED WHEN SECTION 932 (DEFINITION OF "CAPITAL COST") COMES INTO FORCE

(4) For the purposes of subsection (3), "**capital costs**" includes planning, engineering and legal costs directly related to the work for which a capital cost may be incurred under this section.

(5) Authority to make payments under subsection (3) must be authorized by bylaw.

Acquisition and development of parkland

936 (1) If a development cost charge bylaw provides for a charge to acquire or reclaim parkland, all or part of the charge may be paid by providing land in accordance with subsection (2).

(2) Land to be provided for the purposes of subsection (1) must
(a) have a location and character acceptable to the local government, and
(b) on the day the charge is payable, have a market value that is at least equal to the amount of the charge.

(3) If the owner and the local government are not able to agree on the market value for the purposes of subsection (2) (b), the market value must be determined in accordance with the regulations under section 941 (7).

(4) If partial payment of a development cost charge for parkland in the form of land is made, the remainder must be paid in accordance with a bylaw under section 933 (1).

SUB-SECTION 936 (5) WILL BE REPEALED THROUGH REGULATION EARLY IN 2001.

CURRENT
(5) Section 941 (13) applies to land provided under subsection (1).

REPLACEMENT
(5) If land is to be provided under subsection (1), either,
(a) a registerable transfer of the land must be provided to the local government, or
(b) a plan of subdivision on which the land is shown as park must be deposited in the land title office, in which case section 941 (13) and (14) applies.

Adoption procedures for development cost charge bylaw

937 (1) A bylaw that imposes a development cost charge must not be adopted until it has been approved by the inspector.

(2) The inspector may refuse to grant approval under subsection (1) if the inspector determines that

(a) the development cost charge is not related to capital costs attributable to projects included in the financial plan for the municipality or the capital expenditure program bylaw under section 819.1 for the regional district, as applicable, or

(b) the local government has not properly considered the matters referred to in section 934 (4).

(3) The inspector may revoke an approval under subsection (1) in respect of all or part of a bylaw that imposes a development cost charge.

(4) If the inspector revokes an approval, the part of the bylaw in respect of which the revocation applies has no effect until the local government amends the bylaw and obtains the inspector's approval of the amendment.

(5) The inspector may require a municipality, regional district or greater board to provide the inspector with a report on the status of development cost charge collections, expenditures and proposed expenditures for a time period the inspector specifies.

(6) After reviewing the report, the inspector may order the transfer of funds from a development cost charge reserve fund under section 935 (1) to a capital works reserve fund established under section 496 (1) (a).

APPENDIX C:

DEVELOPMENT COST CHARGES (INSTALMENT REGULATION)

B.C. Reg. 166/84
Regulation of the Minister

Deposited June 5, 1984

Municipal Act

Development Cost Charge (Instalments) Regulation

Definitions

1. In this regulation:
"charge" means a development cost charge imposed under section 933 (6) of the *Municipal Act* for a subdivision approval of a building permit:
"developer" means every person on whom a charge is imposed.

Payment may be made by instalment

2. A developer liable to pay a charge may elect to pay it by installments, subject always to the conditions set out in sections 3 to 7.

Exception

3. Section 2 does not apply where the charge is under $50,000 unless the council has by bylaw authorized that all charges under $50,000 imposed within its jurisdiction may be paid by installments in accordance with this regulation.

Payment of charge in full

4. The developer shall pay the charge in full within 2 years after the date that the subdivision is approved or the building permit is granted by paying not less than
(a) 1/3 of the total charge at the time of the approval of the subdivision or granting of the permit, and
(b) 1/2 of the balance within one year after the date of approval of the subdivision or granting of the permit.

Failure to pay

5. Where a developer elects to pay the charge by installments and fails to pay an installment within any time required for payment by section 4, the total balance of the charge becomes due and payable immediately.

Interest

6. No interest is payable on the unpaid balance of a charge until it becomes due and payable, but when it does, it is a condition of election under section 2 that interest is payable from that date until payment at the rate or rates prescribed under section 11 (3) of the *Taxation (Rural Area) Act* for the period of non-payment.

Surety for payment by instalments

7. A developer electing to pay a charge by instalments must deposit with the treasurer at the same time as he pays the first instalment
(a) an irrevocable letter of credit or undertaking from a bank, credit union or a trust company registered under the *Financial Institutions Act*, or
(b) a bond of a surety licensed under the *Insurance Act*, or
(c) a security duly assigned which ensures to the satisfaction of the treasurer that upon default the balance of the unpaid charge will be recovered from the person, the bank, the surety or from the proceeds of the realization of the security, as the case may be.
[am. B.C. 58/85]

APPENDIX D:

PARKLAND CIRCULAR

BRITISH COLUMBIA
Ministry of Municipal Affairs
Municipal Financial Services

CIRCULAR

Circular No. 97:04

Original Issued: February 25, 1997

To: All Municipal and Regional District Treasurers

Re: Parkland Development Cost Charges

Bill 55, introduced in the Spring 1995 Legislation Session, amended sections of the *Municipal Act* to authorize the collection of development cost charges (DCC) for improving parkland, in addition to providing parkland or reclaiming land as parkland.

The amendments were as follows:

1. Section "Development Cost Charges Generally" - subsection on parkland was repealed and the following substituted:

   b) providing and improving parkland

2. Section "Use of Development Cost Charges" - subsection on parkland was repealed and the following substituted:

   (6) to pay the capital costs of
      (i) acquiring parkland or reclaiming land as parkland, or
      (ii) providing fencing, landscaping, drainage and irrigation, trails, rest rooms, changing rooms and playground and playing field equipment on parkland.

The government, as illustrated by comments made in introducing the legislation, intended that the increase in DCC resulting from the addition of expenditures to improve parkland would not be significant. For this reason, the allowable parkland improvements were specifically listed, and deliberately excluded many elements that are usually present in most developed parks. Those elements which are not specifically listed must be funded from other sources of revenue. In furtherance of the direction from government, the Inspector of Municipalities, in reviewing submissions for purposes of approval, will apply a very narrow interpretation of the legislation. While most of the allowable expenditures are self-explanatory, the following comments are offered as an illustration of the position the Inspector will take in his review:

- Landscaping includes the construction of playing fields (levelling ground, planting grass and other plant material) but does not include the construction of parking lots or access roads.
- Irrigation includes sprinkler systems.
- Playground and playing field equipment includes items normally classified as equipment such as swings and slides but does not include buildings or structures such as dugouts, bleachers, or field houses. The term also does not include the construction of tennis or basketball courts, baseball diamonds, tracks or the installation of lighting systems.

This policy remains in effect until such time as the issue can be dealt with in a more comprehensive fashion. As you are aware, work of the Development Finance Review Committee may lead to changes in this particular policy.

If you have any questions, please contact the financial analyst for your area.

(ORIGINAL SIGNED BY:)

Ken MacLeod
Inspector of Municipalities